



**Ameren Illinois Company d/b/a
Ameren Illinois**

**MODERNIZATION ACTION PLAN
Infrastructure Investment Program
2012-2021**

Attachment 2: 2013 Plan

April 1, 2013

Table of Contents

Executive Summary	5
2013 Plan Overview.....	5
Summary 2013 Plan Scope	7
Infrastructure Improvements.....	7
Training Facilities	12
Distribution Automation.....	12
Advanced Metering Infrastructure (AMI).....	14
Volt/Var Optimization	15
Software and Technology Enhancements:.....	16
Summary 2013 Plan Schedule	17
Summary 2013 Plan Capital Investments	17
Summary 2013 Program Staffing	17
Summary 2013 Plan Units of Work.....	17
 Section 1: Infrastructure Improvement Investments	 18
Section 1.A: Replace Primary Distribution Substation Reclosers.....	18
Section 1.B Substation Animal Protection.....	22
Section 1.C: Bulk Substation Improvements	25
Section 1.D: Distribution Transformer Reserve.....	27
Section 1.E: Tie Line Capacity – Line 6973	29
Section 1.F.: Substation Low Side Auto Transfer	29
Section 1.G: High Voltage Distribution Pole Reinforcement.....	30

Section 1.H: Replace High Voltage Distribution Breakers	32
Section 1.I: Spacer Cable Program	32
Section 1.J: Rebuild Primary Distribution Lines	36
Section 1.K: Primary Distribution Lines Capacity Additions	40
Section 1.L: Bulk Transformer Outage Mitigation.....	44
Section 1.M: Rebuild High Voltage Distribution Lines	47
Section 1.N: Expand Bulk Supply Substations.....	51
Section 1.O: Underground Primary Distribution Cable.....	54
Section 1.P: System Tie Primary Distribution.....	58
Section 1.Q: CERT Remediation.....	61
Section 1.R: Infrastructure Improvement Summary	62
Section 2: Training Facilities	64
Section 2A: Training Facilities	64
Section 3: Distribution Automation Programs.....	67
Section 3.A: Primary Distribution Automation	67
Section 3.B: Communication Infrastructure	71
Section 3.C: High Voltage Distribution Relaying	75
Section 3.D: Distribution Substation Metering.....	78
Section 3.E: High Voltage Distribution Automation.....	79
Section 3.F: Test Bed.....	83
Section 3.G: Distribution Automation Summary.....	85
Section 4: Advanced Metering Infrastructure (AMI)	87

Section 5: Volt/Var Optimization	90
Section 5.A: High Voltage Volt/Var Control	90
Section 5.B: Primary Distribution Volt/Var Control	93
Section 5.C: Volt/Var Optimization Summary	96
Section 6: Software and Technology Enhancements	98
Section 6.A: Advanced Distribution Management System (ADMS)	98
Section 6.B: Replace Distribution Engineering Workstation (DEW)	101
Section 6.C: Software and Technology Enhancements Summary	101
Appendix A: Summary-Level Plan Information.....	103

Executive Summary

2013 Plan Overview

On January 3, 2012, Ameren Illinois Company (“AIC”) filed its proposed performance-based formula rate, Modernization Action Plan - Pricing (“Rate MAP-P”), with the Illinois Commerce Commission (“Commission”) pursuant to Section 16-108.5 of the Public Utilities Act (“Act”). The Commission commenced Docket No. 12-0001 to review that filing. In making that filing, AIC confirmed that it elected to become a “participating utility”, and committed to undertake the investments described in Section 16-108.5(b) of the Act. Section 16-108.5(b) also calls on AIC, within 60 days of such filing, to submit a plan for satisfying its infrastructure investment program commitments pursuant to subsection (b), which must include a schedule and staffing plan for the current and next calendar year. On March 2, 2012, AIC submitted its original plan for the calendar year 2013.

Accordingly in 2013, AIC submits to the Commission a revised 2013 Infrastructure Investment Program, hereafter referred to as the Plan, for informational purposes, as prescribed by the Act. As also prescribed, the 2013 Plan organizes individual projects under two broad categories of investment (Infrastructure Related and Smart Grid). AIC has further broken these down into six more detailed areas (Infrastructure Improvements, Training Facilities, Distribution Automation, AMI, Volt/Var Optimization, and Software & Technology Enhancements).

Infrastructure Related Investments: Section 1 of the Plan sets forth electric system upgrades, modernization projects, and training facilities. AIC has further broken this down into two subcategories:

A. Infrastructure Improvements

B. Training Facilities

Smart-Grid Related Investments: Section 2 of the Plan describes the Smart Grid electric system upgrades and transmission and distribution infrastructure upgrades and modernization of these systems. AIC has further broken this are up into four subcategories.

A. Distribution Automation

B. AMI

C. Volt/Var Optimization

D. Software and Technology Enhancements

The 2013 Plan includes a projected cumulative total of \$5.8 million of incremental capital investment and associated expense in electric system upgrades, modernization projects, and training facilities (“Infrastructure Related Investments”). The 2013 Plan also includes a projected cumulative total of \$30.5 million of incremental capital investment and associated expense in “Smart Grid” electric system upgrades.

As required by Section 16-108 (b), the total projected \$36.3 million of cumulative incremental capital investment under the 2013 Plan will be incremental to AIC’s total annual capital investment program, as defined in Section 16-108.5(b). That is, over the course of 2013, AIC will invest a projected cumulative total of at least \$36.3 million more capital than a capital investment program that invested at an annual rate defined by AIC’s average capital spend for calendar years 2008, 2009, and 2010 as reported in AIC’s applicable Federal Energy Regulatory Commission (“FERC”) Form 1s.

The information provided within the 2013 Plan contemplates investments that AIC currently proposes to make in 2013 pursuant to Section 16-108.5 of the Act. All investments and amounts shown are subject to revision as AIC refines and adapts its 2013 Plan in light of future analysis, findings, and circumstances.

In the event that Section 16-108.5 becomes inoperative or Rate MAP-P is terminated, then the 2013 Plan, including but not limited to all programs and investments, will also become inoperative and terminate immediately, which is permitted by law.

Summary 2013 Plan Scope

Infrastructure Improvements. These programs are described in Section 1 and include, but are not limited to, the following specific programs. A brief overview of each program is described below, with a detailed description of each in Section 1.

A. Replace Primary Substation Distribution Reclosers. This program is projected to replace nine primary distribution substation reclosers in 2013. These three phase oil reclosers will be replaced with modern single phase vacuum tripping devices. This work will provide reduced outages during single phase faults and modern relaying will provide tighter coordination and fault locating capabilities. Engineering will also commence for future year projects.

B. Substation Animal Protection. This program is to install electric animal resistant fences around susceptible equipment inside substations. Engineering will commence for 2014 projects.

C. Bulk Substation Improvements. This program involves improving designated bulk supply substations to minimize large double bus outages due to a single contingency equipment failure. Engineering will commence for this program in 2013.

D. Distribution Substation Transformer Reserve. This program will add distribution substation transformer reserve to select substations by adding a second transformer, upgrading transformers in a two unit station, re-enforcing existing distribution feeder ties, and constructing new distribution feeder ties. Engineering and site preparation will commence for this program in 2013.

E. Ties Capacity – Line 6973. This program will implement system upgrades needed to provide a reserve tie or loop feed with 69 kV high voltage distribution Line 6973, which is presently a radial line serving a peak load of roughly 42 MVA. This line originates at the Busch substation and serves the following substations: Morton-Cat, North Morton, Central, Southwood, Tazewell, Mindale, Armington, Burt, and Corn Belt Hoopdale. The scope of work required may include building a new bulk supply substation or expanding an existing substation and constructing several miles of new 69 kV line. Investment for this program will commence in 2015.

F. Substation Low Side Auto Transfer. This program will add low side 12KV transformers and tie breakers to allow automatic low side transfer in some larger distribution substations with two or more transformers. AIC has over 150 substations 34 or 69KV high side, > 10.0 MVA with more than one transformer. A large percentage of these stations have no automatic transfer to the alternate

transformer and bus in the event of a transformer or arrester fault. Most existing stations already have physical room for the additional breakers. Engineering will commence on this program in 2014.

G. High Voltage Distribution Pole Reinforcement. This program provides for structural reinforcement of select poles on high voltage distribution lines. Reinforcement and treatment of select poles on these older lines will limit the likelihood of cascading failures due to extreme transverse loading. There is no investment in this program in 2013 pending an exploration of alternative solutions to steel channel reinforcement.

H. Replace High Voltage Distribution Breakers. This program replaces aging high voltage distribution breakers. Engineering will commence on this program in 2014.

I. Spacer Cable Program. This program entails the replacement of designated primary distribution spacer cable. There are .3 miles of spacer cable projected to be replaced in 2013. Engineering for 2014 projects will also commence in 2013.

J. Rebuild Primary Distribution Lines. This program plans to rebuild and reconductor primary distribution circuits. Lines or portions of lines would be selected based on reliability history, customer counts, and system improvement possibilities. In 2013, AIC projects to rebuild approximately .3 miles of primary distribution under this program.

K. Primary Distribution Line Capacity Additions. This program is designed to rebuild existing lines for additional capacity, or build new lines to split existing loads. In 2013 AIC projects to add additional capacity on one primary distribution circuit under this program.

L. Bulk Transformer Outage Mitigation. The program is to provide system reinforcements by installing a second bulk supply transformer, building a new bulk supply substation, or reconductoring high voltage distribution lines to provide the system redundancy required to facilitate system maintenance and avoid load curtailments during a bulk substation transformer outage. Engineering for this program will commence in 2013.

M. Rebuild High Voltage Distribution Lines. The objective of this program is to rebuild and/or reconductor high voltage distribution lines. Factors such as pole/structure condition, deteriorated conductor, static wire condition, accessibility for repairs, line loading relative to thermal limits, and outage history will be considered in selecting and prioritizing the high voltage distribution lines to reconductor or rebuild. In many cases, the scope of work may be limited to a portion of a line or targeted to address a specific reliability concern such as pole

failures or lightning related outages. There is one high voltage distribution line rebuild project of .4 miles planned for 2013.

N. Expanded Bulk Supply Substations. This program will construct new bulk supply substations (e.g., 161/69 kV, 138/69 kV, and 138/34.5 kV), or install new bulk supply transformers at existing substation locations, and implement associated line and equipment reinforcements. Engineering for this program will commence in 2013.

O. Underground Primary Distribution Cable. This program is designed to replace or remediate through injection select primary underground cable. In 2013 there are 4.5 miles of primary underground cable identified to replace.

P. System Tie Primary Distribution. This program plans to build primary distribution circuits to be able to tie adjacent circuits together for better operating efficiency and reliability. There is no investment in this program for 2013.

Q. CERT Remediation. This program specifically targets existing and potential Customers Exceeding Service Reliability Targets (CERT) for remediation each year. There is no investment in this program for 2013.

Training Facilities

This program provided for the purchase and renovation of a training facility in the Belleville area to facilitate electric, relay, and smart grid training. The facility consists of indoor and outdoor training space that provides state of the art classroom facilities in addition to hands-on training with physical equipment. This program also included enhancements to our current electric training facility in Decatur as well as the purchase of additional office space required to assist in accommodating a portion of the staffing needs set out in the bill. A more detailed description of this program including scope, schedule, capital budget, and staffing are included in Section 2 of this document.

Distribution Automation. These programs are described in Section 3 and include the following programs. A brief overview of each program is shown below, with a detailed description of each set forth in Section 3.

A. Primary Distribution Automation - This program will install both line and substation primary distribution level automation schemes to promote automatic fault isolation and service restoration. For 2013 there are nine primary distribution automation projects projected.

B. Communication Infrastructure – This program is designed to build the support communication infrastructure to support Smart Grid devices and functions. It is an enabling program and in 2013 the communication infrastructure will be extended for the 2013 Smart Grid projects along with engineering being started for future year projects.

- C. High Voltage Distribution Relaying.** This program is designed for replacement of select electro-mechanical relays with microprocessor based relays on AIC's high voltage distribution system. Benefits include enhanced coordination opportunities and fault location capabilities. Engineering for 2014 projects will commence in 2013.
- D. Distribution Substation Metering.** This program adds distribution substation transformer and circuit load metering that will remotely read and report. There is no investment in this program projected for 2013.
- E. High Voltage Distribution Automation.** This program is designed to install smart switching devices on select high voltage distribution lines and place strategically located Fault Circuit Indicators (FCI) to facilitate fault isolation and faster restoration of service to the remaining load. There are five switching units projected to be installed in 2013 along with FCI's at 45 locations.
- F. Smart Grid Test Bed -** The intent of this Smart Grid Test Bed program is to establish the necessary infrastructure, processes, and resources to implement the Smart Grid Test Bed requirements of the Act. The Test Bed will provide applicants the opportunity to test Smart Grid related equipment, services and business models within a utility scale environment. Applicants will be allowed to have equipment connected to the utility grid for the purpose of demonstrating that the equipment or systems function as designed. The Test Bed will validate applicant sponsored business models or services by testing the functional aspects of specific equipment or verification that services/business models provide the intended results based upon the applicants proposals. The Smart Grid Test Bed program also establishes the necessary

infrastructure to perform AIC sponsored testing of electric distribution system equipment.

Advanced Metering Infrastructure (AMI). A brief overview of this program is described below, with a more detailed description set forth in Section 4.

A. AMI. This program involves the planned replacement of 62% of the retail electric meters on the AIC distribution system with Smart Meters. This program include deployment of an Advanced Metering Infrastructure (“AMI”), which provides a two-way communications infrastructure to support the metering functions and other customer service applications such as remote disconnect. Expected benefits include reductions in projected bills, unaccounted for energy, and consumption on inactive meters. Deployment of Smart Meters will occur pursuant to the most current Advanced Metering Infrastructure Deployment Plan (“AMI Plan”) filed with the ICC.

Volt/Var Optimization. These programs are described in Section 5 and include, but are not limited to, the following specific programs. A brief overview of each program is shown below, with a detailed description of each set forth in Section 5.

A. High Voltage Volt/Var Control. This program is to facilitate dynamic voltage control and optimal reactive power flow on the high voltage distribution system. Generally this involves installing remote switching capability and control on bulk supply transformers load tap changers (LTC's), switching capacitor banks, and controlling bulk supply voltage regulators using a computerized technology solution. The initial focus is to ensure all switch high voltage distribution capacitor banks have SCADA control and voltage indication. Engineering for 2014 projects will commence in 2013.

B. Primary Distribution Volt/Var Control. This program is intended to provide dynamic voltage control and optimal reactive power flow on select primary distribution circuits. This technique will be applied at the primary distribution level by controlling transformer load tap changers (LTCs), switching capacitor banks, and controlling voltage regulators using a computerized technology solution. This will require the addition of SCADA at each LTC, voltage regulator, and switched capacitor bank location. Expected benefits include reduced system losses and reduced customer energy consumption due to a lower delivery voltage via a tighter control on the voltage bandwidth. Engineering for 2014 projects will commence in 2013.

Software and Technology Enhancements: These programs are described in Section 6 and include, but are not limited to, the following specific programs. A brief overview of each program is shown below, with a detailed description set forth in Section 6.

- A. Advanced Distribution Management System (ADMS).** AIC is implementing an ADMS in order to replace its existing Distribution SCADA System (DDOS) and its Outage Analysis System (OAS). The ADMS system will be a fully integrated suite of applications that will provide distribution system operators with a common user interface to monitor, control, and manage the electric distribution system and smart devices throughout the distribution system. Phase three of this program began in 2012 and consisted of a three cycle implementation. The SCADA portion was implemented in the 3rd quarter of 2012, the DMS/Switching portion to be in early 2014, and the OMS/Mobile portion is anticipated in mid-2014.
- B. DEW Replacement.** This project is to replace the current engineering analysis tool which is called Distribution Engineering Workstation (DEW). This tool has limitations related to circuit balancing, capacitor bank placements, and voltage drop calculations. Replacement with a state of the art engineering analysis tool will effectively enable implementation of many of the smart grid programs which require distribution engineering analysis as part of the proposed project design. Work on this program will commence in 2015.

Summary 2013 Plan Schedule

The program schedule explains the planned flow of work within each program over the course of the year. Each schedule represents an annual work plan containing a high level task list. It is recognized that scope priorities will be adjusted over the course of the year as new information is obtained. Note that 2013 is considered a ramp-up year for some of the programs. Detailed 2013 planned schedules for specific program areas are provided in the sections that follow.

Summary 2013 Plan Capital Investments

The program capital projection identifies the planned monthly capital cost for each program. The 2013 Plan investment total is projected to be \$36.3 million in incremental capital investments plus associated expense.

Summary 2013 Program Staffing

AIC will calculate FTEs in accordance with Appendix A of the revised Modernization Action Plan, Infrastructure Investment, 2012-2021 submittal for 2013.

Summary 2013 Plan Units of Work

The program quantity of units describes the projected number of work units, where applicable, that are planned to be completed in 2013 for each program area. Units of work for each program are discussed, as applicable, in that program's respective section of the Plan.

Section 1: Infrastructure Improvement Investments

Section 1.A: Replace Primary Distribution Substation Reclosers

1.A.1: 2013 Program Scope

Replacement of select three phase hydraulic reclosers with single phase vacuum devices with modern relaying is expected to reduce CI by isolating single phase faults rather than tripping all three phases. Replacement of the older hydraulic reclosers is also expected to reduce the failure rate of distribution reclosers and reduce future maintenance expenditures.

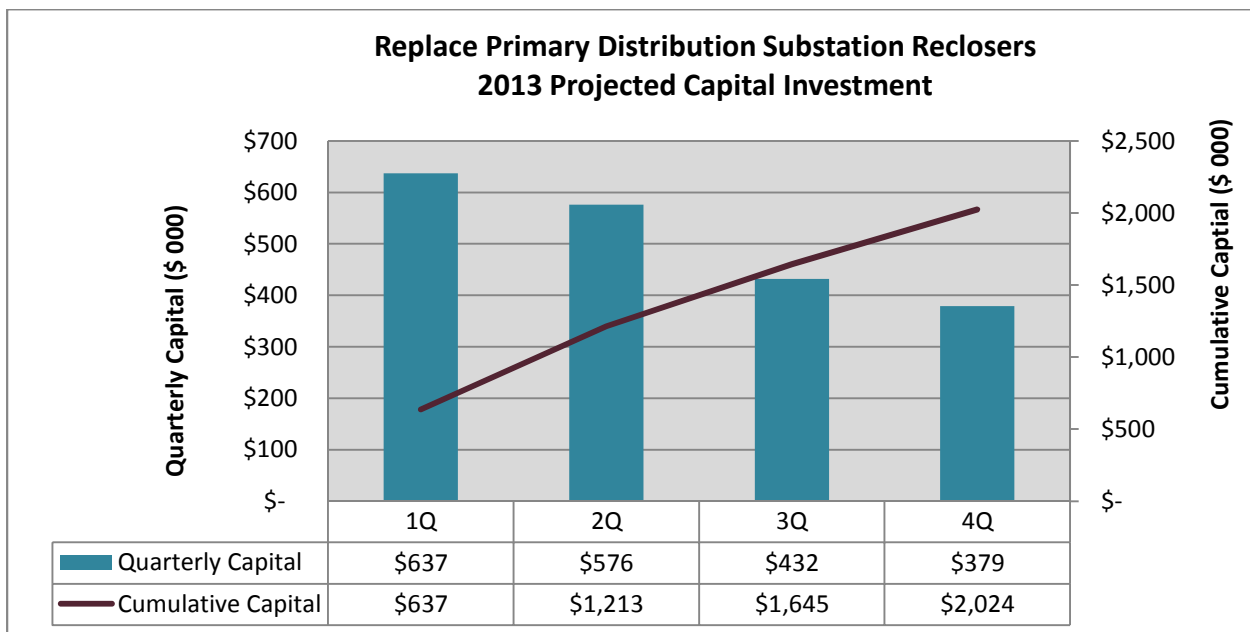
The breakers were selected on the basis of:

1. Greatest number of customers
2. Single phase tripping acceptability
3. Criticality of load
4. Maintenance history of recloser
5. Fault duty
6. Upcoming scheduled recloser maintenance
7. Workload management

1.A.2: 2013 Program Capital Investments

Figure 1.A.2 represents the projected 2013 capital investment for the Replace Primary Distribution Substation Reclosers program. AIC estimates the 2013 program cost to be \$2.0 million plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

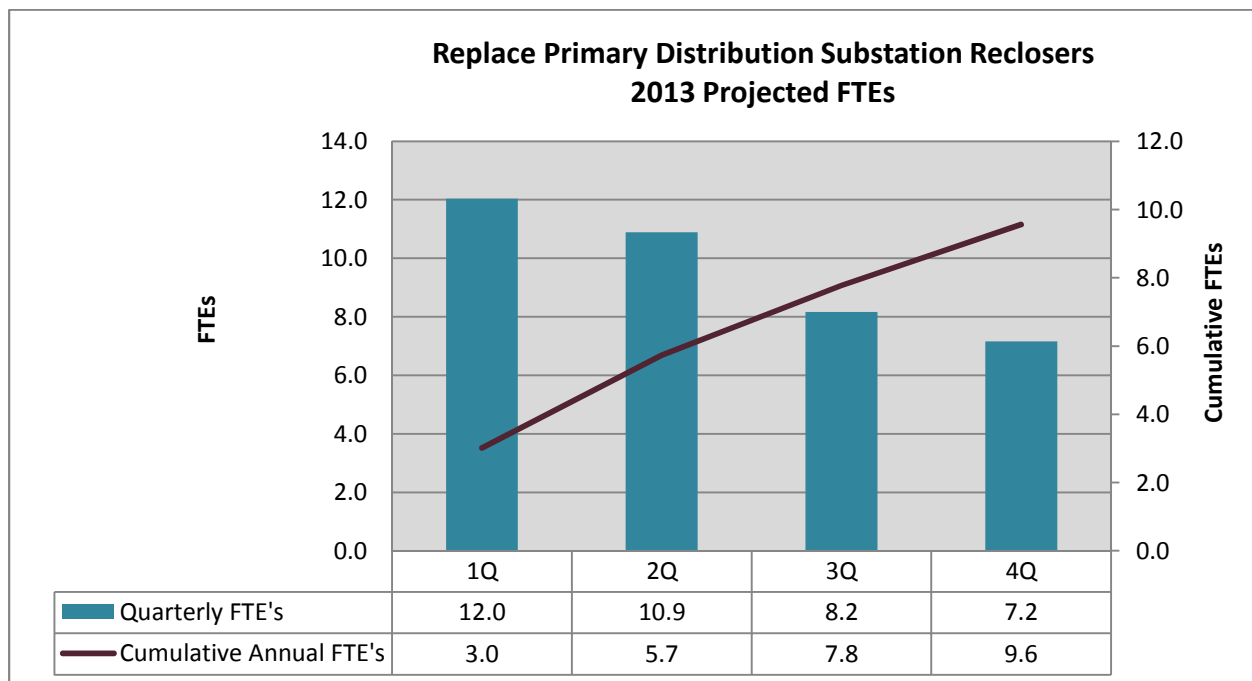
Figure 1A.2: Replace Primary Distribution Substation Reclosers 2013 Capital Investments



1.A.3: 2013 Program FTEs

Figure 1.A.3 represents the projected FTEs required to perform the scheduled 2013 scope of work. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision, and craft.

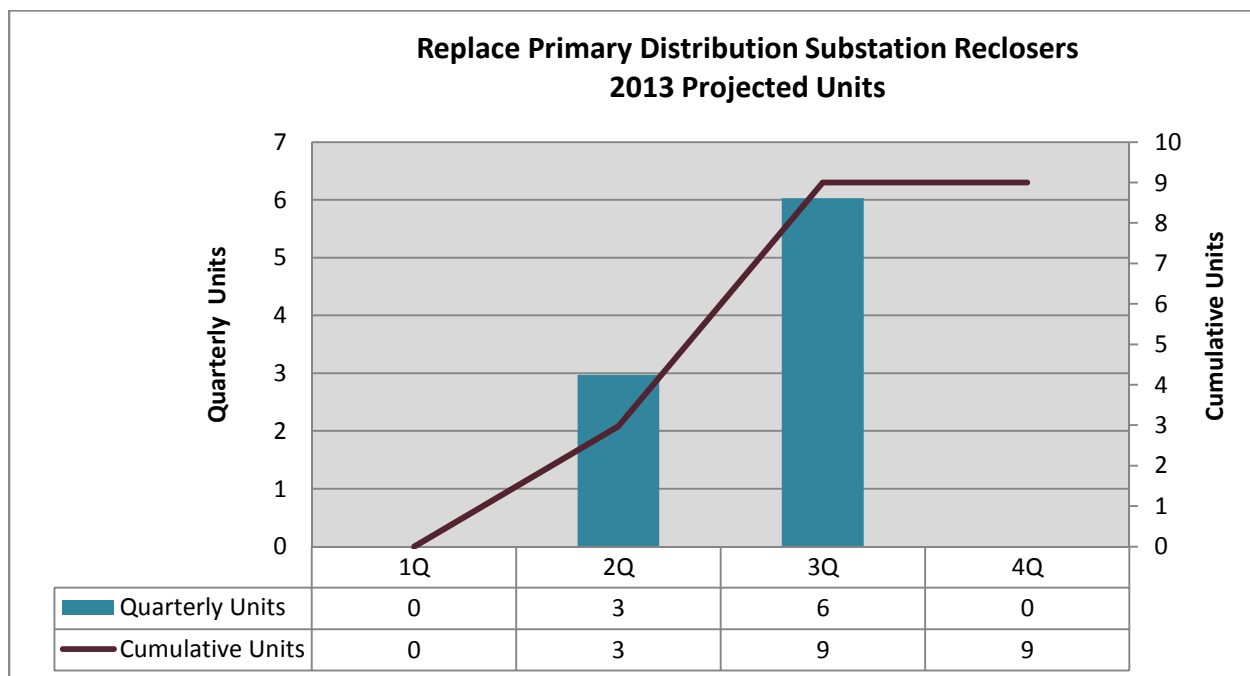
Figure 1.A.3: Replace Primary Distribution Substation Reclosers 2013 FTEs



1.A.4: 2013 Program Schedule/Units

Figure 1.A.4 shows the number of reclosers planned to be replaced in 2013. This chart will serve as a tracking mechanism over the course of 2013, and reflects the scope of work planned to be accomplished, as well as the scope of work left to be performed. Estimates of cost, units of work, and schedules for that work may evolve over time.

Figure 1.A.4: Replace Primary Distribution Substation Reclosers



Section 1.B Substation Animal Protection

1.B.1: 2013 Program Scope

This program is to install animal protection for the designated substations by the installation of electrical or passive animal fences to mitigate animal caused substation outages. Passive fences are used where the substations have insufficient room for an electric fence to be located safely between the equipment and the safety fence.

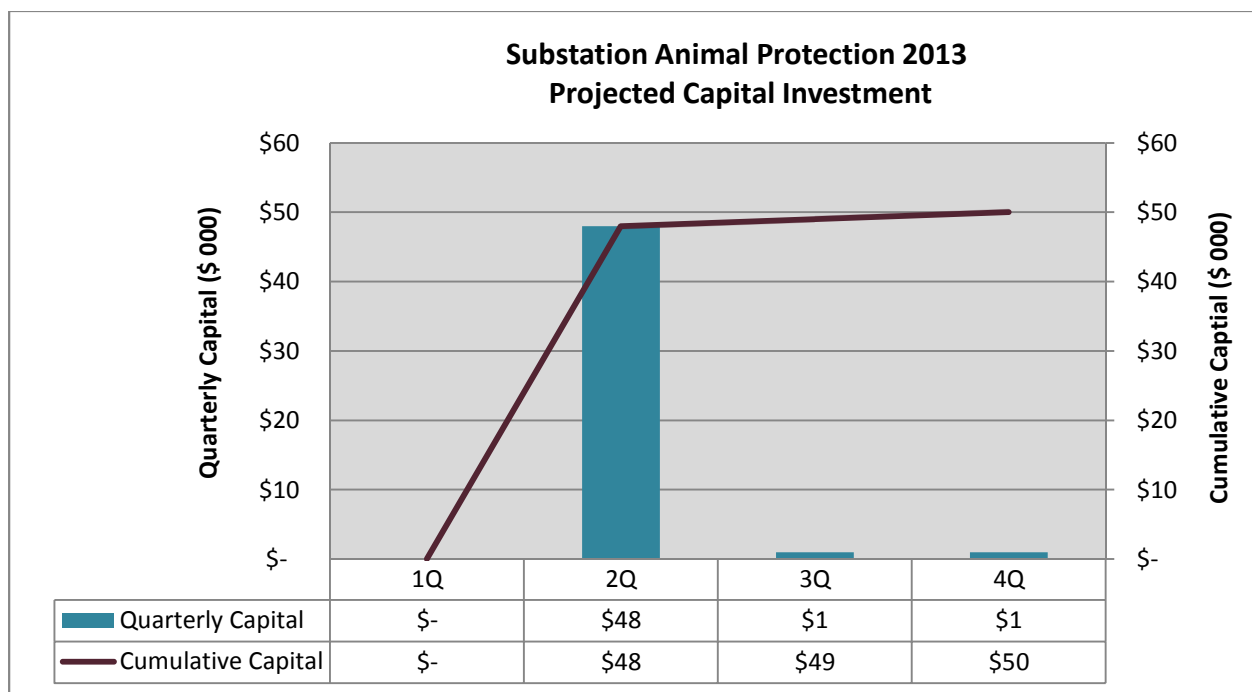
The substations to have animal fences installed were selected by the following criteria:

1. Greatest number of customers.
2. Criticality of the load
3. Outage history
4. Site evaluation
5. Workload management

1.B.2: 2013 Program Capital Investments

Figure 1.B.2 represents the projected 2013 capital investment for the Substation Animal Protection program. AIC estimates the 2013 program cost to be \$50,000 in capital investment, plus associated expenses. Estimates of cost, units of work and schedules for that work may evolve over time.

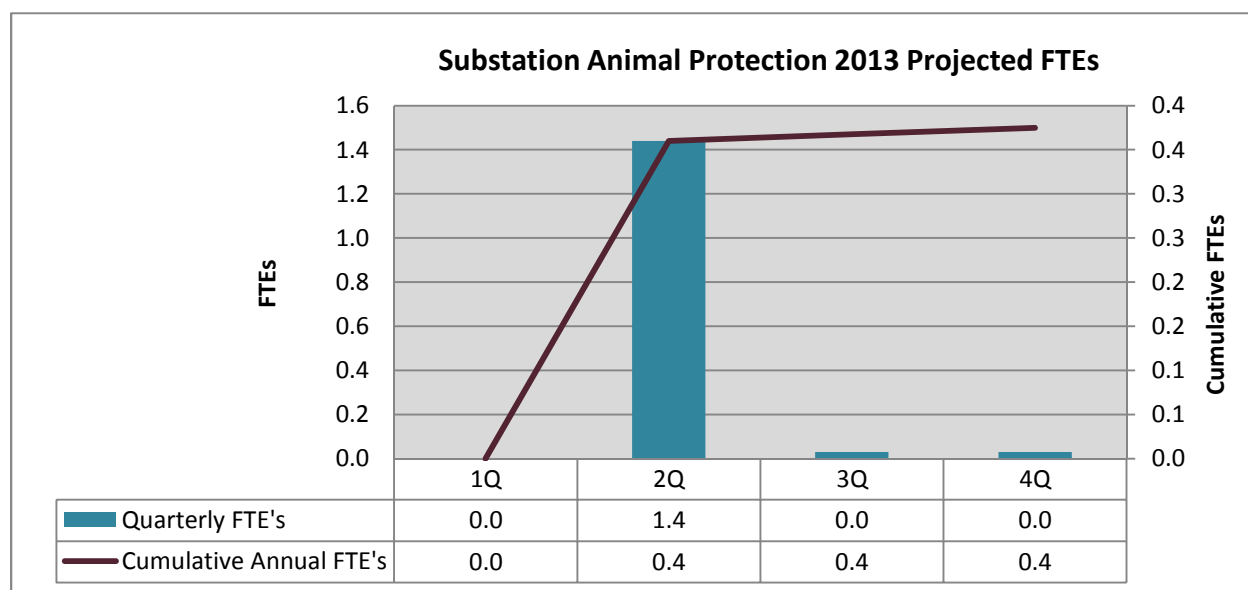
Figure 1.B.2: Substation Animal Protection 2013 Capital Investments



1.B.3: 2013 Program FTEs

Figure 1.B.3 represents the projected FTEs required to perform the scheduled 2013 scope of work. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision, and craft.

Figure 1.B.3: Substation Animal Protection 2013 FTEs



1.B.4: Program Units/Schedule

No units are projected to be installed under this program in 2013. The investment is for engineering only.

Section 1.C: Bulk Substation Improvements

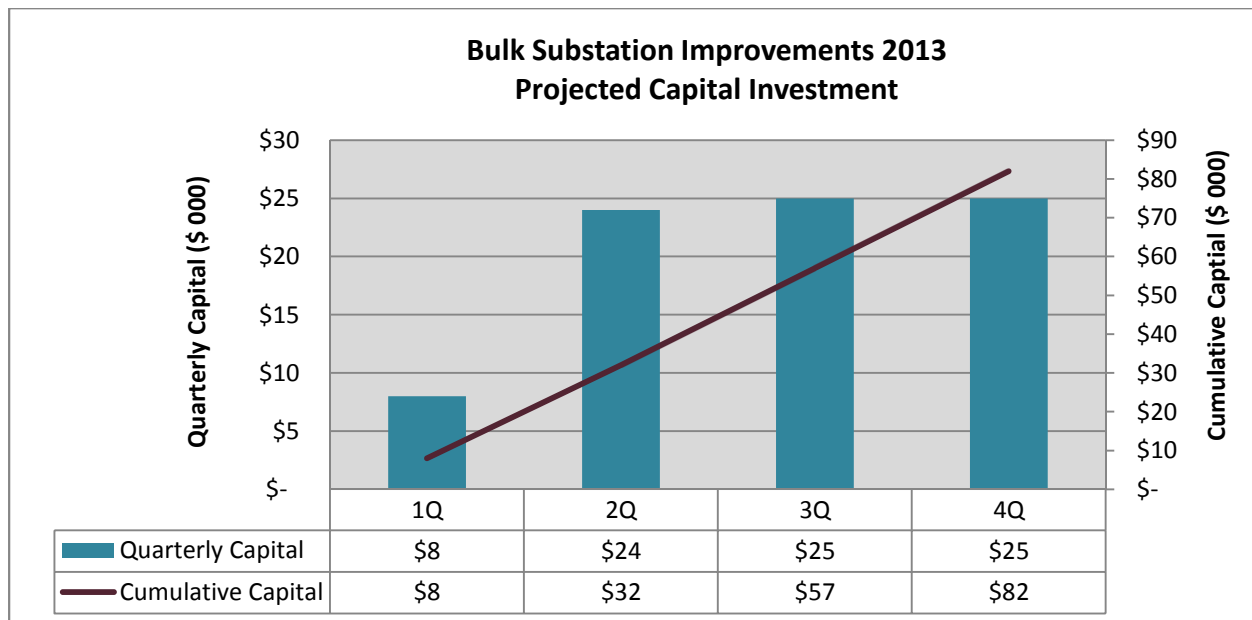
1.C.1: 2013 Program Scope

This program involves improving designated bulk supply substations to minimize large double bus outages due to a single contingency equipment failure. Engineering will commence on this program in 2013.

1.C.2: 2013 Program Capital Investments

Figure 1.C.2 represents the projected 2013 capital investment for the Bulk Substation Improvements program. AIC estimates the 2013 program cost to be approximately \$82,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

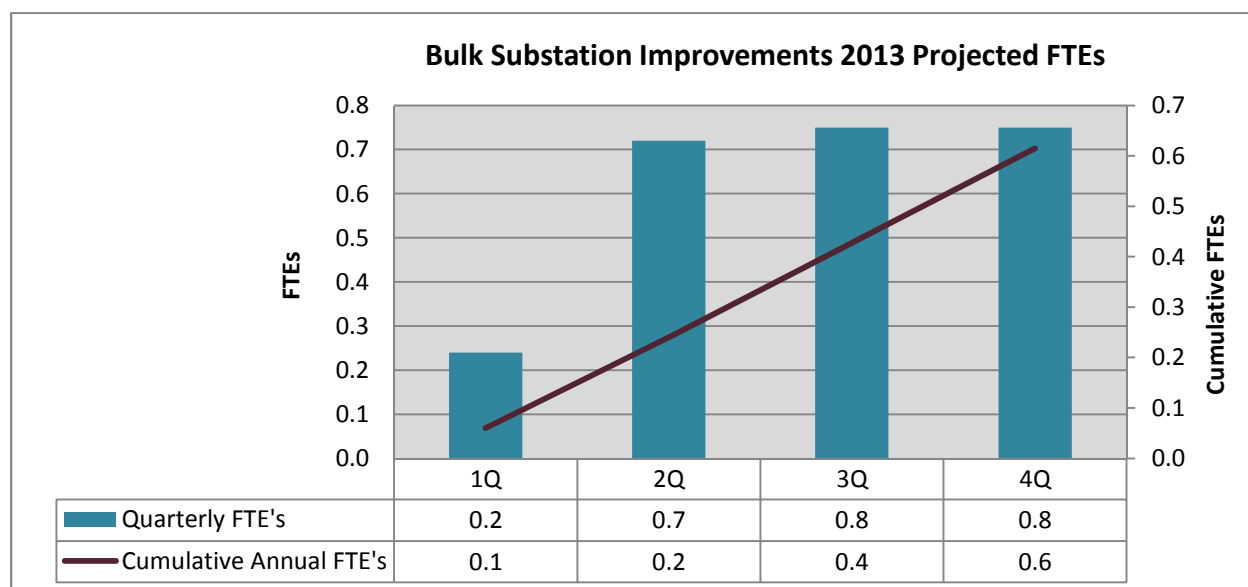
Figure 1.C.2: Bulk Substation Improvements 2013 Capital Investment



1.C.3: 2013 Program FTEs

Figure 1.C.3 represents the projected FTEs required to perform the scheduled scope of work for the Bulk Substation Improvements program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 1.C.3: Bulk Substation Improvements 2013 FTEs



1.C.4: Program Units/Schedule

There are no units anticipated to be completed in 2013. The investment is for engineering only.

Section 1.D: Distribution Transformer Reserve.

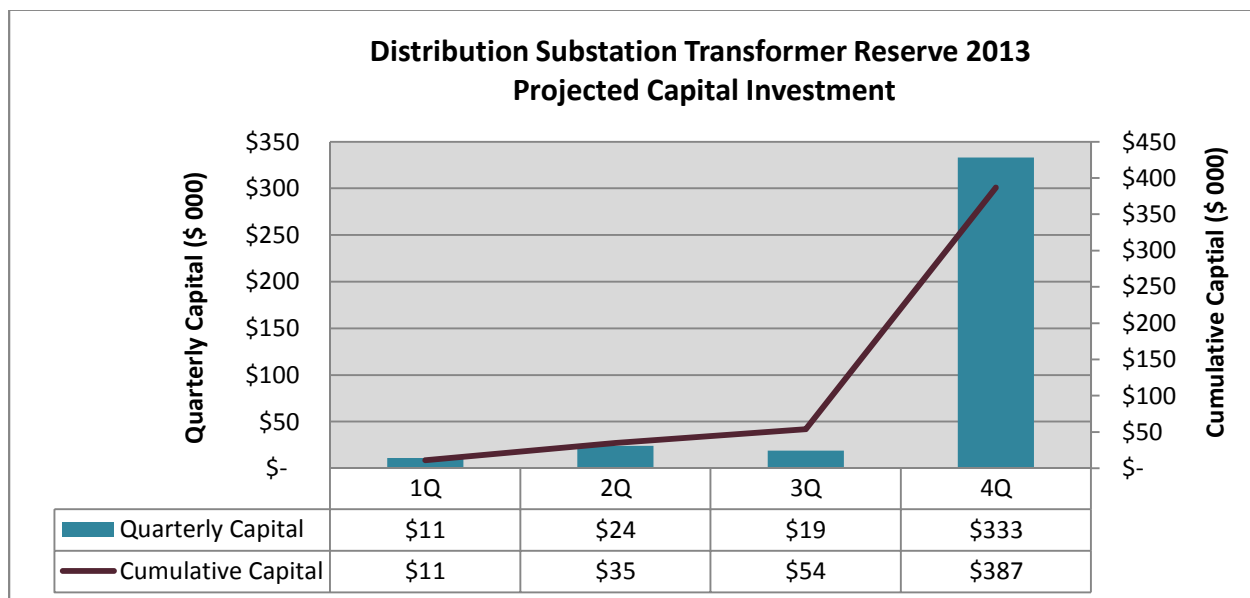
1.D.1: 2013 Program Scope

This program will add distribution substation transformer reserve to select substations by adding a second transformer, upgrading transformers in a two unit station, re-enforcing existing distribution feeder ties, and constructing new distribution feeder ties. Engineering and equipment procurement will commence on this program in 2013. Not units are projected to be completed until 2014.

1.D.2: 2013 Program Capital Investments

Figure 1.D.2 represents the projected 2013 capital investment for the Distribution Transformer Reserve program. AIC estimates the 2013 program cost to be approximately \$387,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

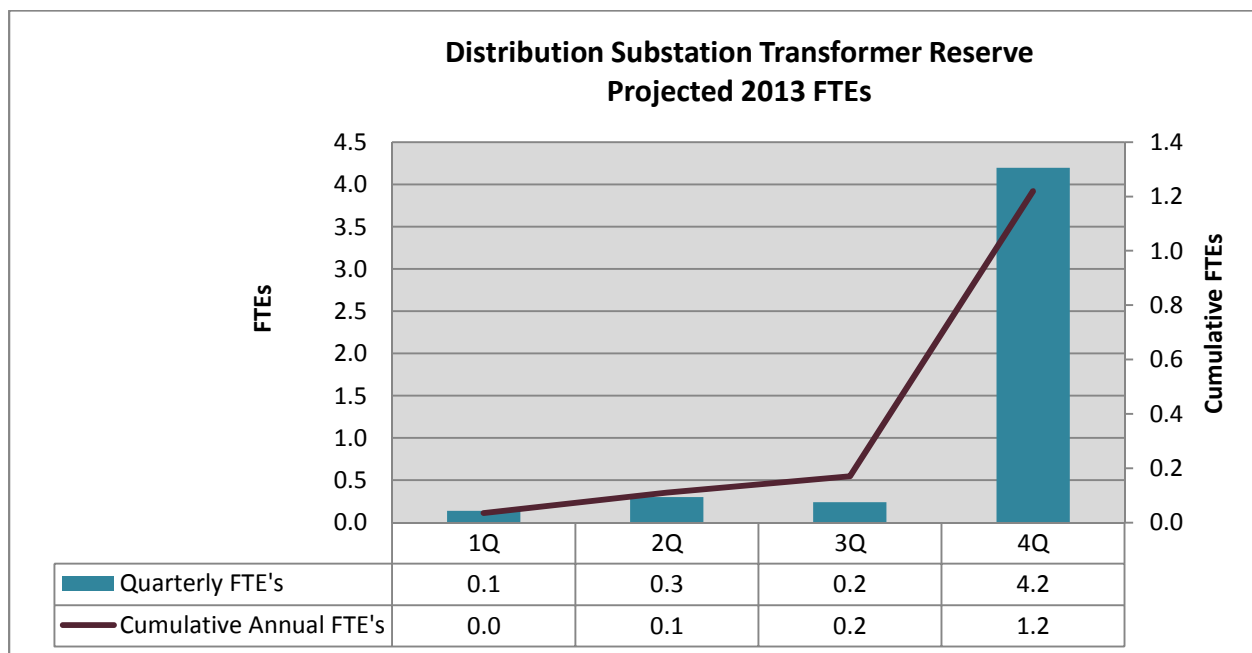
Figure 1.D.2: Distribution Transformer Reserve 2013 Capital Investment



1.D.3: 2013 Program FTEs

Figure 1.D.3 represents the projected FTEs required to perform the scheduled scope of work for the Distribution Transformer Reserve program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 1.D.3: Distribution Transformer Reserve 2013 FTEs



1.D.4: Program Units/Schedule

There are no units anticipated to be completed in 2013.

Section 1.E: Tie Line Capacity – Line 6973

This project is scheduled to start in 2015.

Section 1.F.: Substation Low Side Auto Transfer

1.F.1: 2013 Program Scope

This program will add low side 12KV transformer and tie breakers to allow automatic low side transfer in some larger distribution substations with two or more transformers.

Engineering will commence on this program in 2014.

Section 1.G: High Voltage Distribution Pole Reinforcement

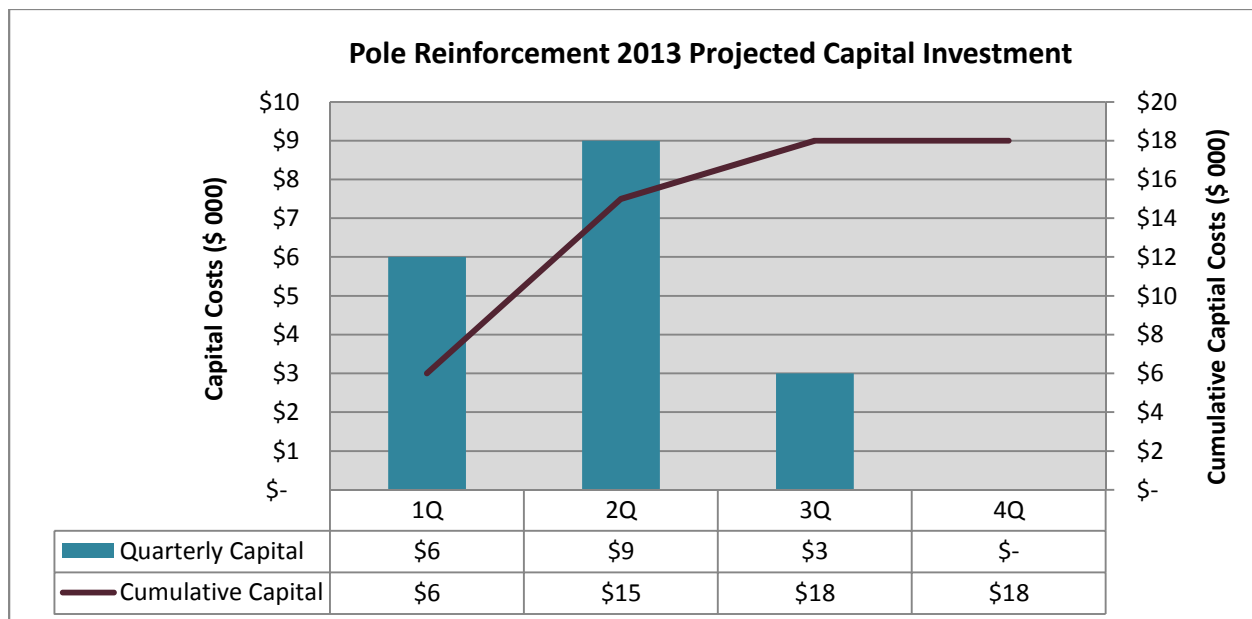
1.G.1: 2013 Program Scope

This program will add composite structures in lines that have historically incurred multiple consecutive pole failures during storms. This program will be engineering only in 2013.

1.G.2: 2013 Program Capital Investments

Figure 1.G.2 represents the projected 2013 capital investment for the High Voltage Distribution Pole Reinforcement program. AIC estimates the 2013 program cost to be approximately \$18,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

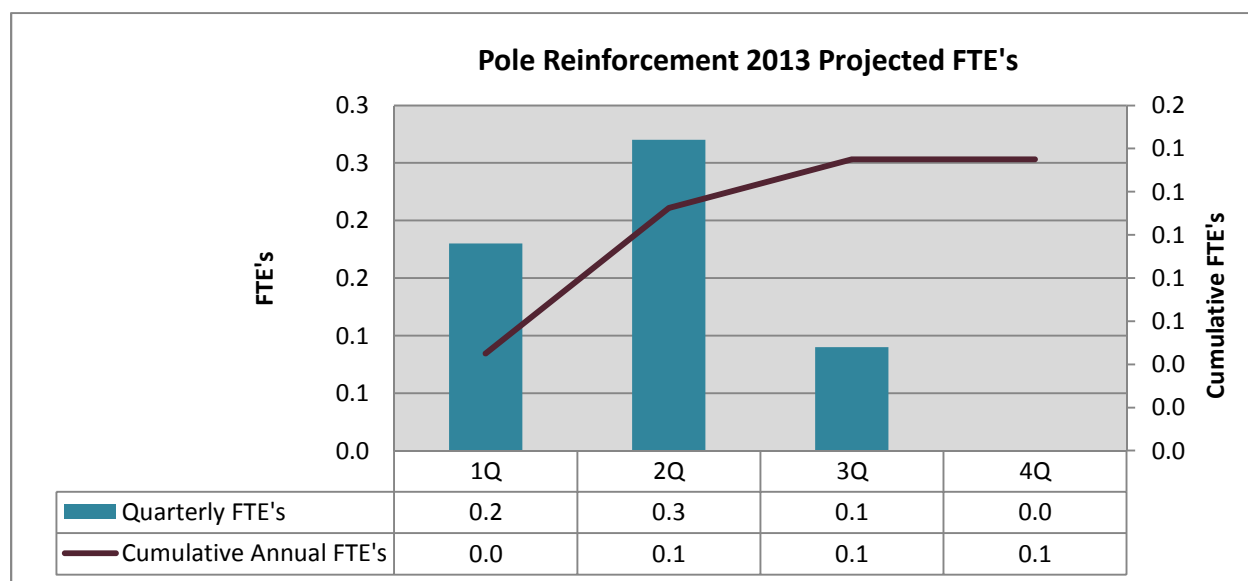
Figure 1.G.2: HV Pole Reinforcement Program 2013 Capital Investment



1.G.3: 2013 Program FTEs

Figure 1.G.3 represents the projected FTEs required to perform the scheduled scope of work for the High Voltage Distribution Pole Reinforcement program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 1.G.3: HV Distribution Pole Reinforcement 2013 FTEs



1.G.4: Program Units/Schedule

2013 is engineering only. There are no units projected to be completed in 2013.

Section 1.H: Replace High Voltage Distribution Breakers

1.H.1: 2013 Program Scope

This program is to replace aging high voltage distribution breakers. Engineering will commence on this program in 2014.

Section 1.I: Spacer Cable Program

1.I.1: 2013 Program Scope

This program is designed to improve the performance of spacer cable systems and the reliability of the circuits involved. In cases where the insulation has severely deteriorated, this involves replacement of the existing spacer cable. Depending upon the specific application, a new spacer cable system may be installed or new open wire conductors may be utilized.

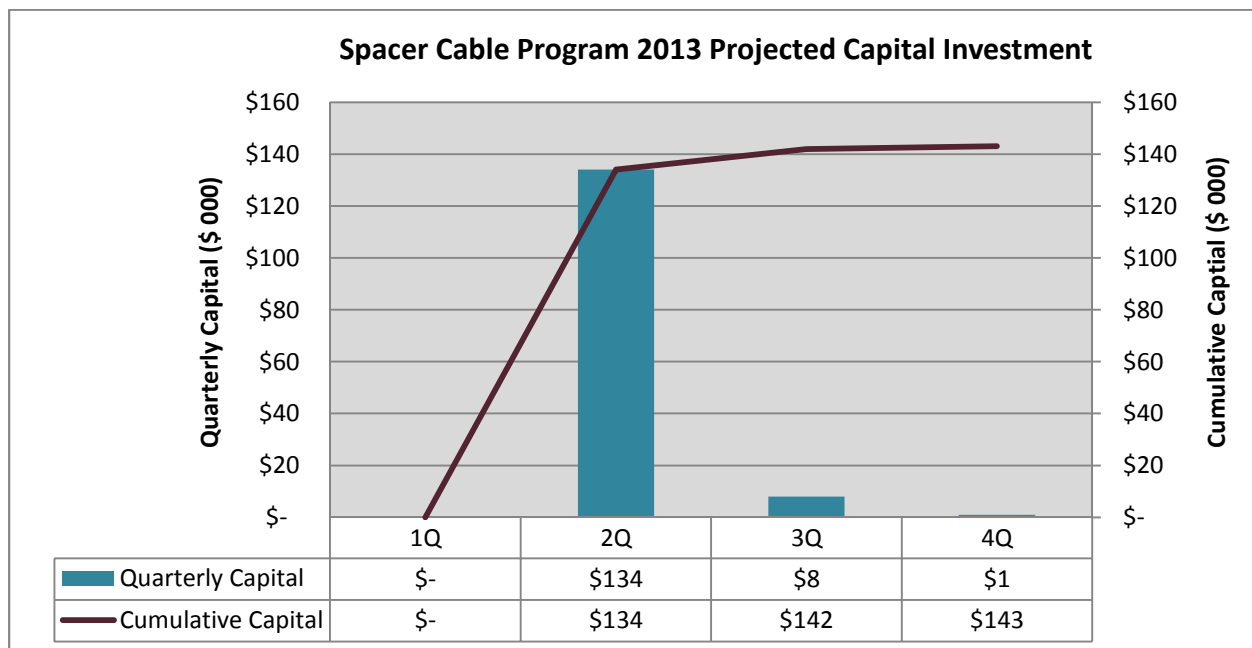
The spacer cable projects for 2013 were selected on the basis of:

1. Inspection results
2. Greatest number of customers
3. Engineering availability
4. Workload management

1.I.2: 2013 Program Capital Investments

Figure 1.I.2 represents the projected 2013 capital investment for the Spacer Cable Program. AIC estimates the 2013 program cost to be approximately \$143,000 in capital investment, plus associated expenses. Estimates of cost, units of work and schedules for that work may evolve over time.

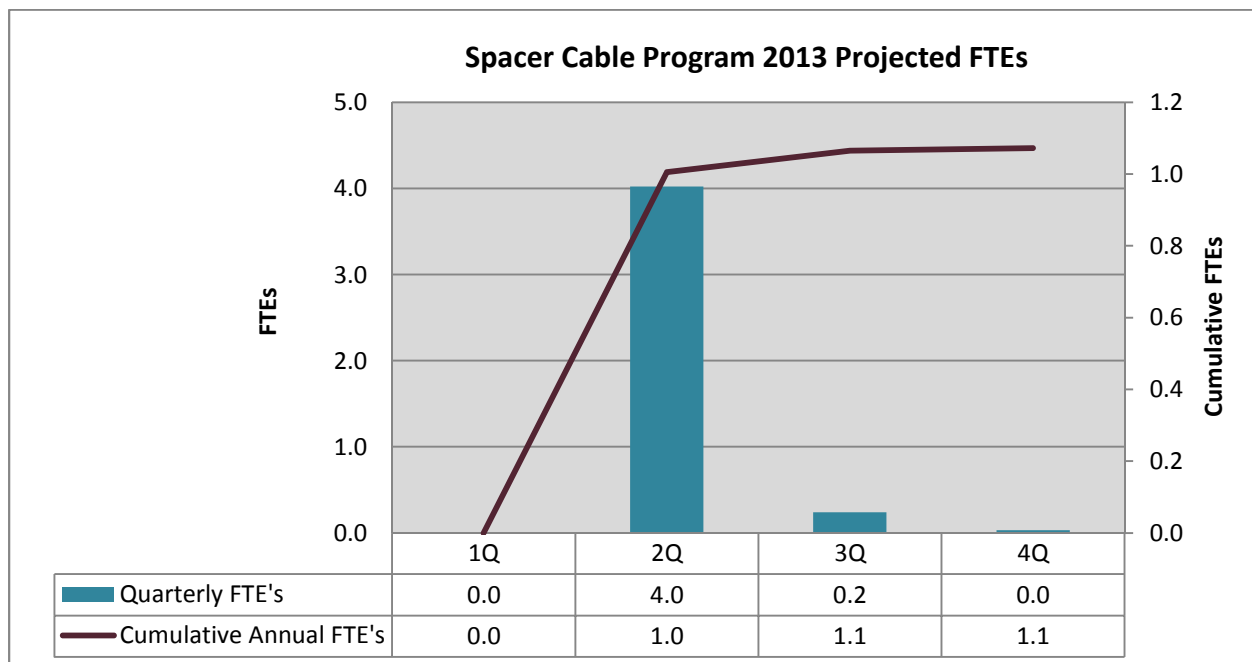
Figure 1.I.2: Spacer Cable Program 2013 Capital Investments



1.I.3: 2013 Program FTEs

Figure 1.I.3 represents the projected FTEs required to perform the scheduled scope of work for the Spacer Cable Program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

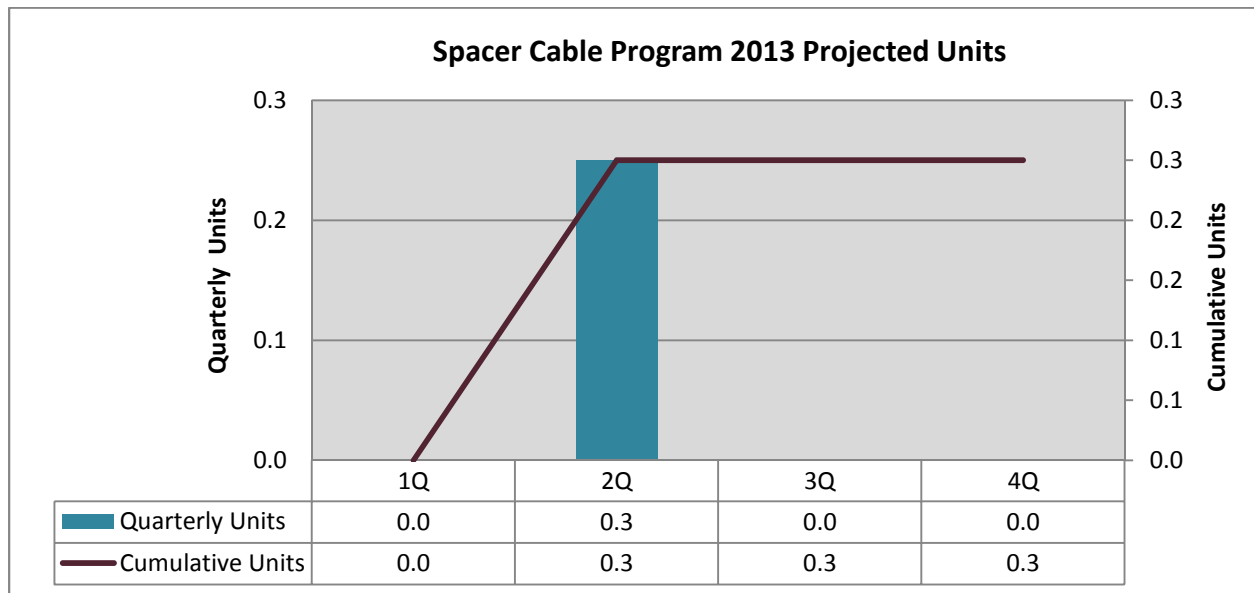
Figure 1.I.3: Spacer Cable Program 2013 FTEs



1.I.4: Program Units/Schedule

Figure 1.I.4 represents the projected units required to be completed for the Spacer Cable Program in 2013. . Engineering for 2014 projects will commence in 2013. The units for the Spacer Cable Program are “miles”.

Figure 1.I.4: Spacer Cable Program 2013 Units



Section 1.J: Rebuild Primary Distribution Lines

1.J.1: 2013 Program Scope

This program is designed to rebuild select distribution circuits. These projects could include reconductoring, re-poling, or total rebuilds.

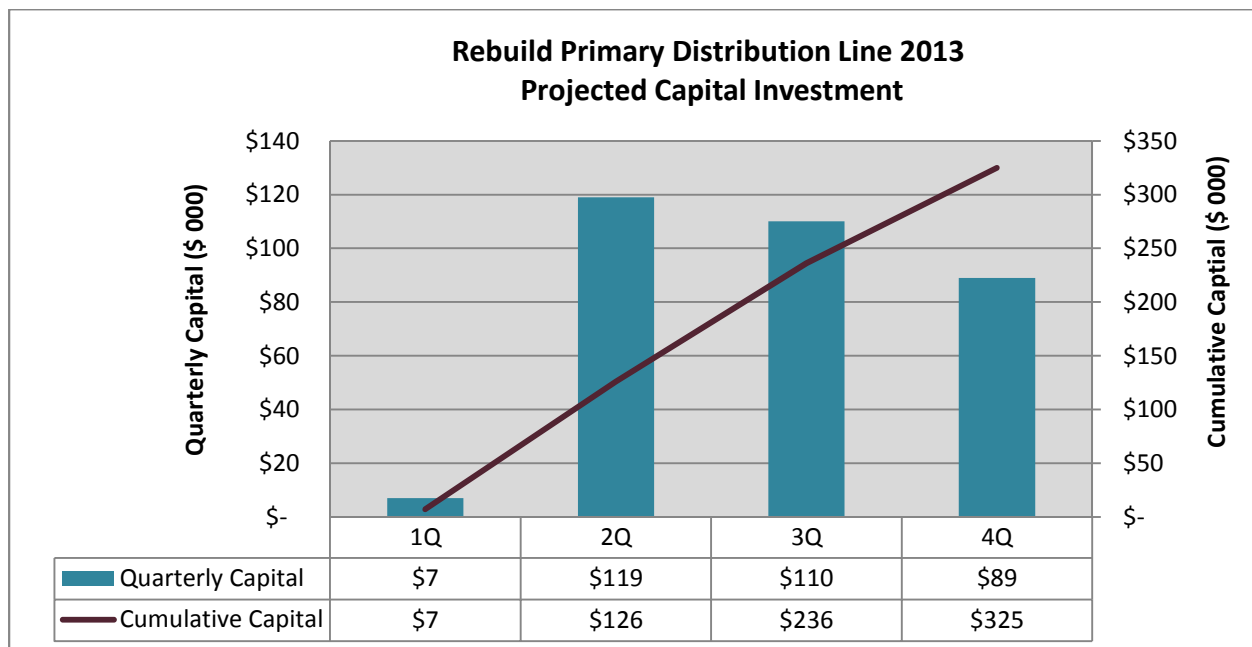
These projects were selected on the basis of:

1. Line Condition
2. Greatest number of customers
3. Outage history
4. Workload management
5. System improvement possibilities

1.J.2: 2013 Program Capital Investments

Figure 1.J.2 represents the projected 2013 capital investment for the Rebuild Primary Distribution Lines program. AIC estimates the 2013 program cost to be approximately \$325,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

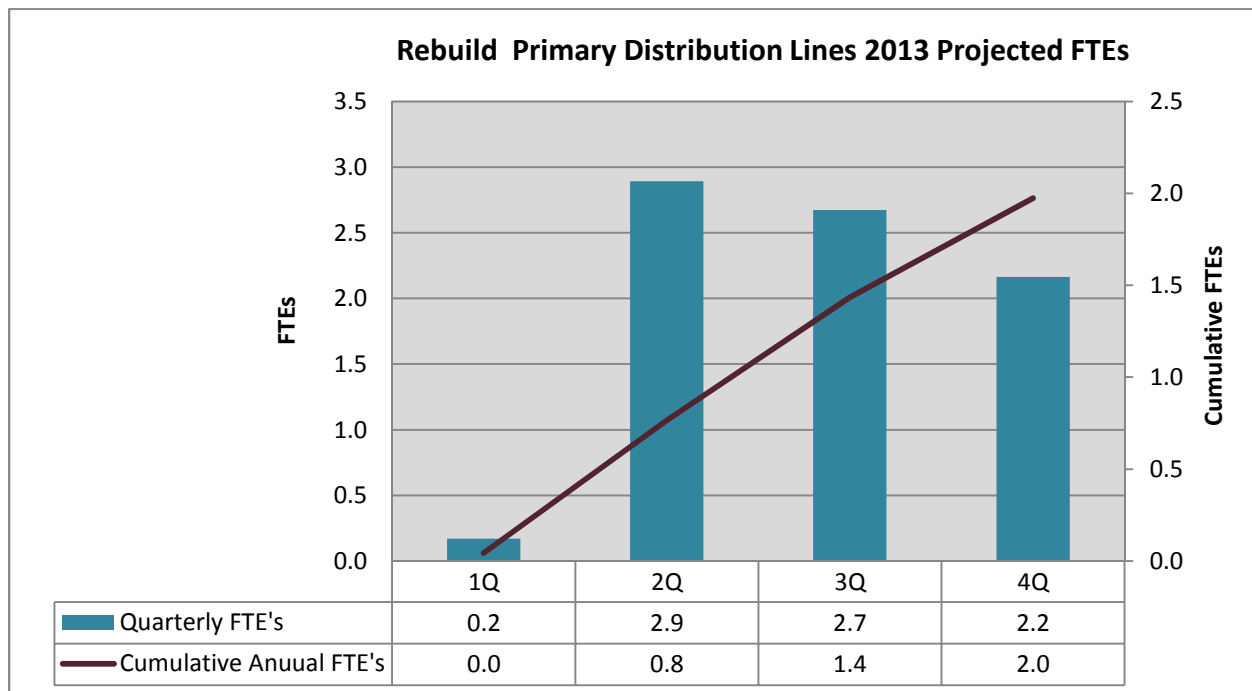
Figure 1.J.2: Rebuild Primary Distribution Lines 2013 Capital Investments



1.J.3: 2013 Program FTEs

Figure 1.J.3 represents the projected FTEs required to perform the scheduled scope of work for the Rebuild Primary Distribution Lines program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

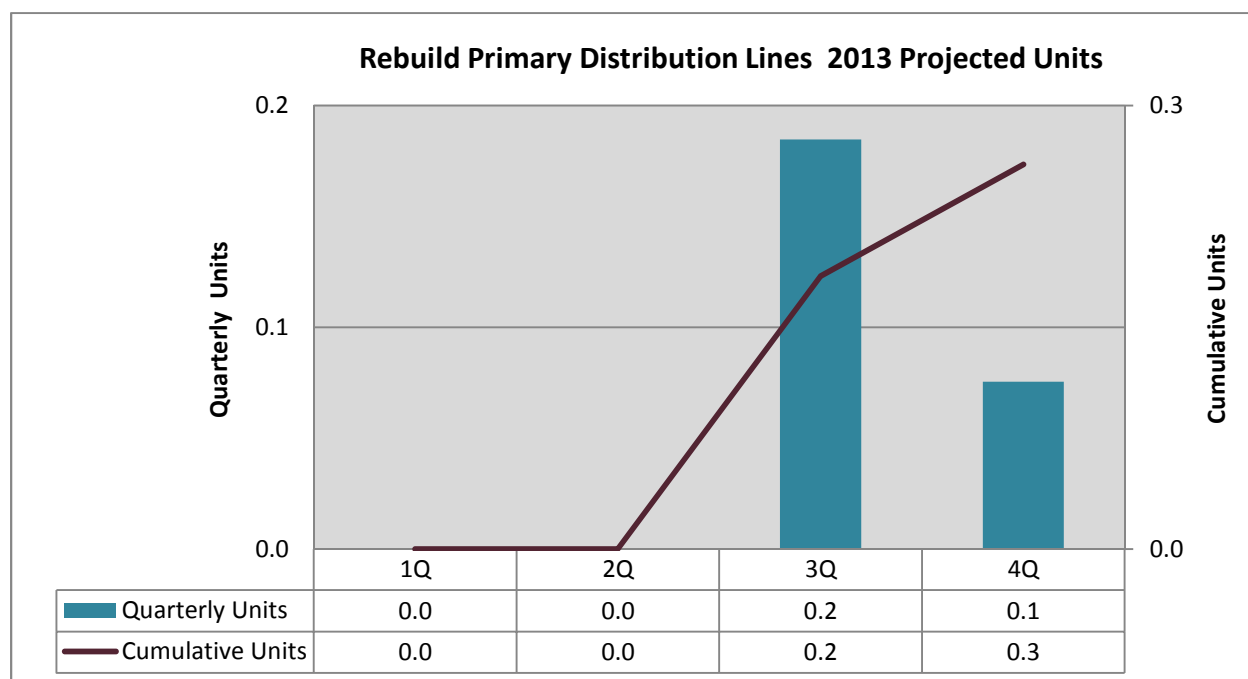
Figure 1.J.3: Rebuild Primary Distribution Lines 2013 FTEs



1.J.4: Program Schedule/Units

Figure 1.J.4 shows the miles of distribution line rebuilds to be completed in 2013 under this program. This chart will serve as a tracking mechanism over the course of the year, and reflects the scope of work planned to be accomplished as well as the scope of work left to be performed. Estimates of cost, units of work, and schedules for that work may evolve over time. The units shown below are “miles”.

Figure 1.J.4: Rebuild Primary Distribution Lines Units



Section 1.K: Primary Distribution Lines Capacity Additions

1.K.1: 2013 Program Scope

This program is designed to upgrade or modify existing distribution circuits to provide additional capacity. The additional capacity may be required due to such items as existing or anticipated load, load transfer capability, or voltage conversions.

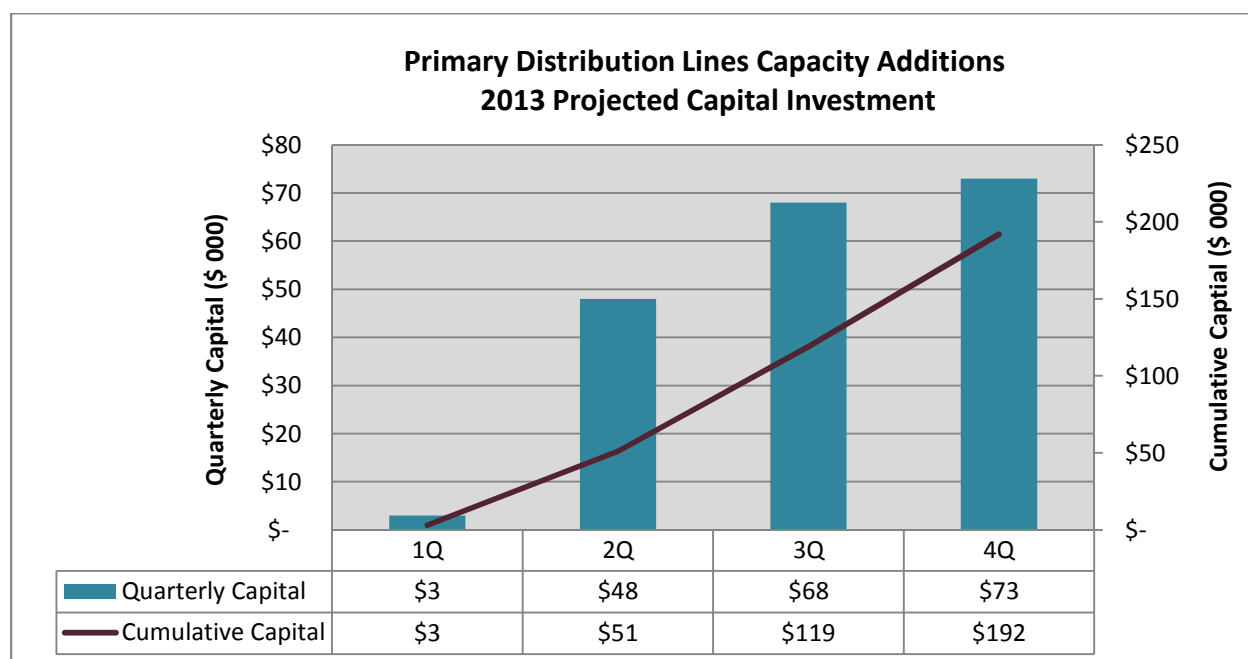
These projects were selected on the basis of:

1. Thermal load considerations
2. Load transfer capabilities
3. Projected load growth
4. Reliability history
5. Workload management

1.K.2: 2013 Program Capital Investments

Figure 1.K.2 represents the projected 2013 capital investment for the Primary Distribution Lines Capacity Additions. AIC estimates the 2013 program cost to be approximately \$192,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

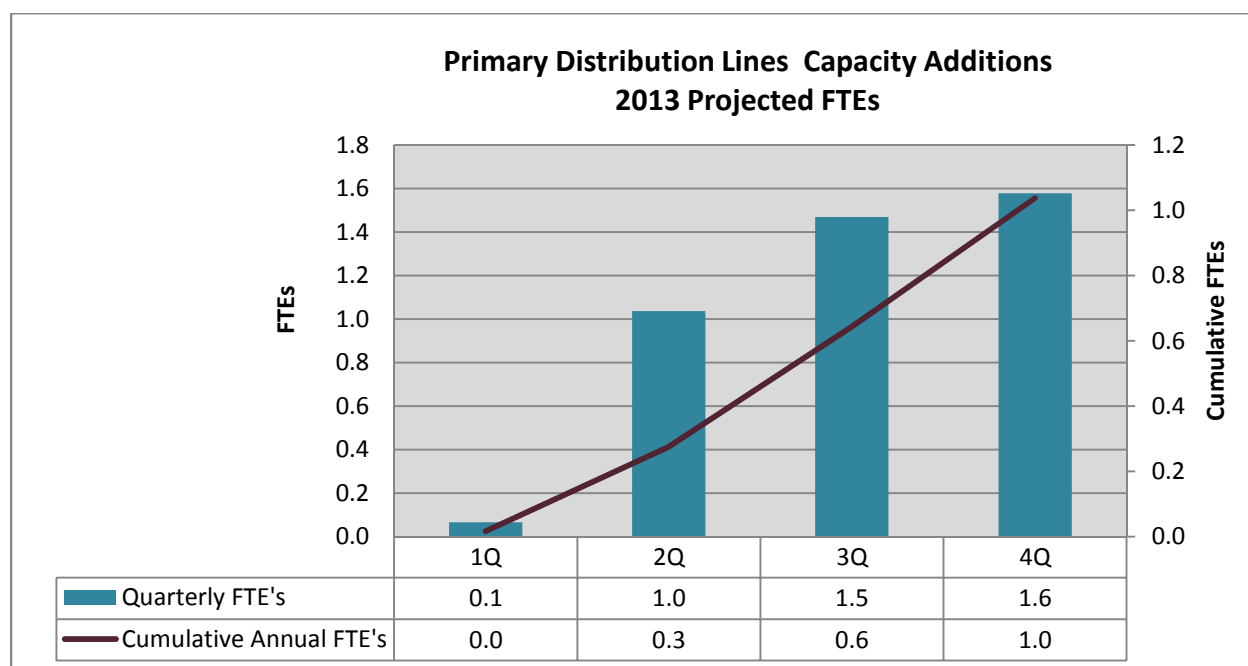
Figure 1.K.2: Primary Distribution Line Capacity Additions 2013 Capital Investments



1.K.3: 2013 Program FTEs

Figure 1.K.3 represents the projected FTEs required to perform the scheduled scope of work for the Primary Distribution Line Capacity Addition program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

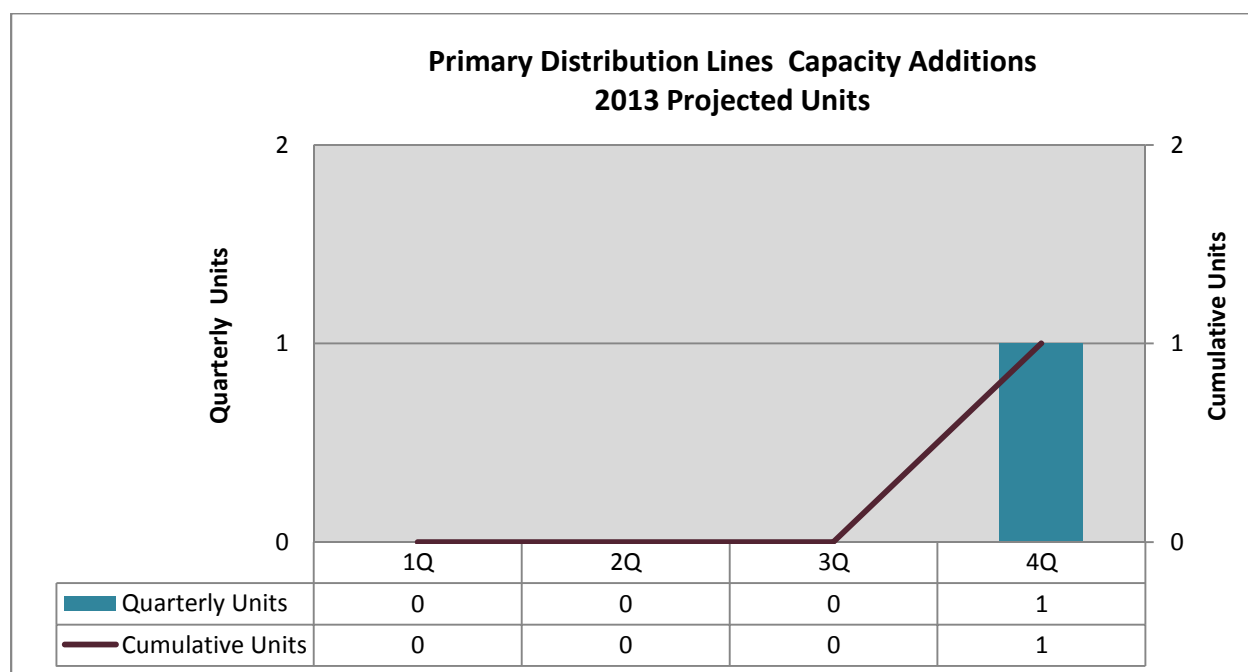
Figure 1.K.3: Primary Distribution Lines Capacity Additions 2013 FTEs



1.K.4: Program Schedule/Units

Figure 1.K.4 shows the number of distribution line capacity additions to be completed in 2013 under this program. This chart will serve as a tracking mechanism over the course of the year, and reflects the scope of work planned to be accomplished as well as the scope of work left to be performed. Estimates of cost, units of work, and schedules for that work may evolve over time. The units shown below are “projects”.

Figure 1.K.4: Primary Distribution Lines Capacity Additions 2013 Units



Section 1.L: Bulk Transformer Outage Mitigation

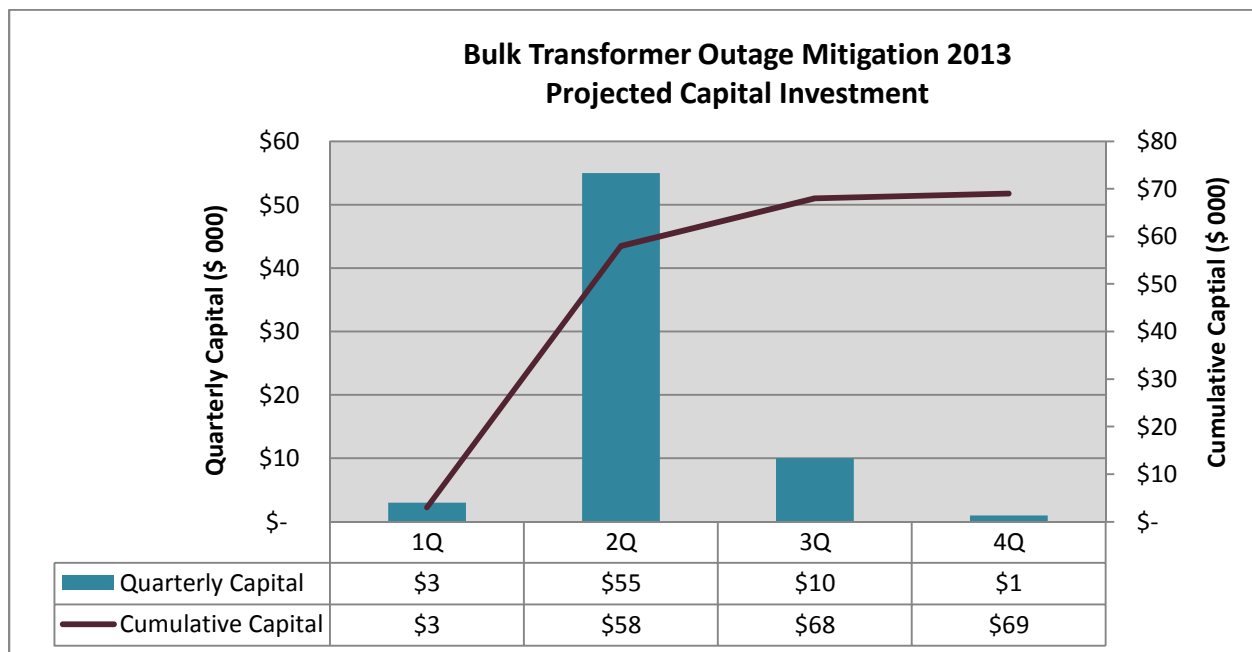
1.L.1: 2013 Program Scope

The program is to provide system reinforcements by installing a second bulk supply transformer, building a new bulk supply substation, or reconductoring high voltage distribution lines to provide the system redundancy required to facilitate system maintenance and avoid load curtailments during a bulk substation transformer outage. Engineering for 2014 projects will commence in 2013.

1.L.2: 2013 Program Capital Investments

Figure 1.L.2 represents the projected 2013 capital investment for the Bulk Transformer Outage Mitigation. AIC estimates the 2013 program cost to be approximately \$69,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

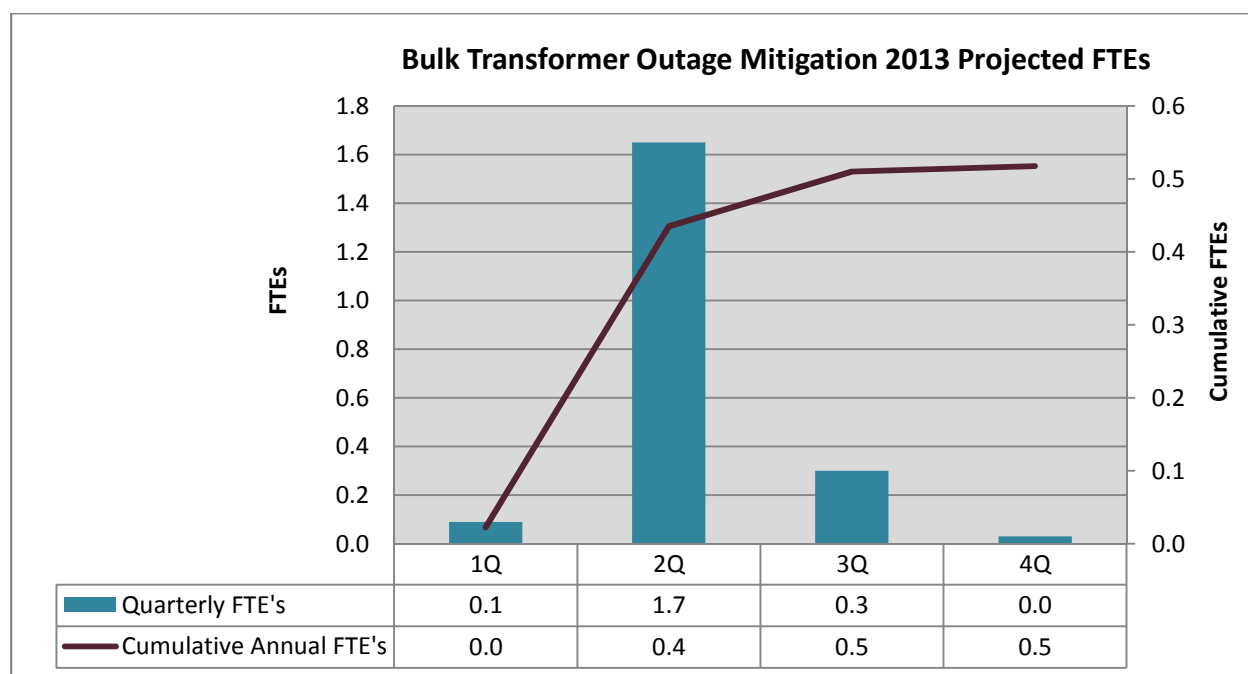
Figure 1.L.2: Bulk Transformer Outage Mitigation 2013 Capital Investments



1.L.3: 2013 Program FTEs

Figure 1.L.3 represents the projected FTEs required to perform the scheduled scope of work for the Bulk Transformer Outage Mitigation program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 1.L.3: Bulk Transformer Outage Mitigation 2013 FTEs



1.L.4: Program Schedule/Units

Engineering will commence in 2013 for 2014 projects. There are no Bulk Transformer Outage Mitigation projects projected to be completed in 2013 under this program.

Section 1.M: Rebuild High Voltage Distribution Lines

1.M.1: 2013 Program Scope

This program is designed to rebuild existing high voltage distribution circuits that are in poor condition, require additional capacity, require additional lighting protection, or need additional system ties.

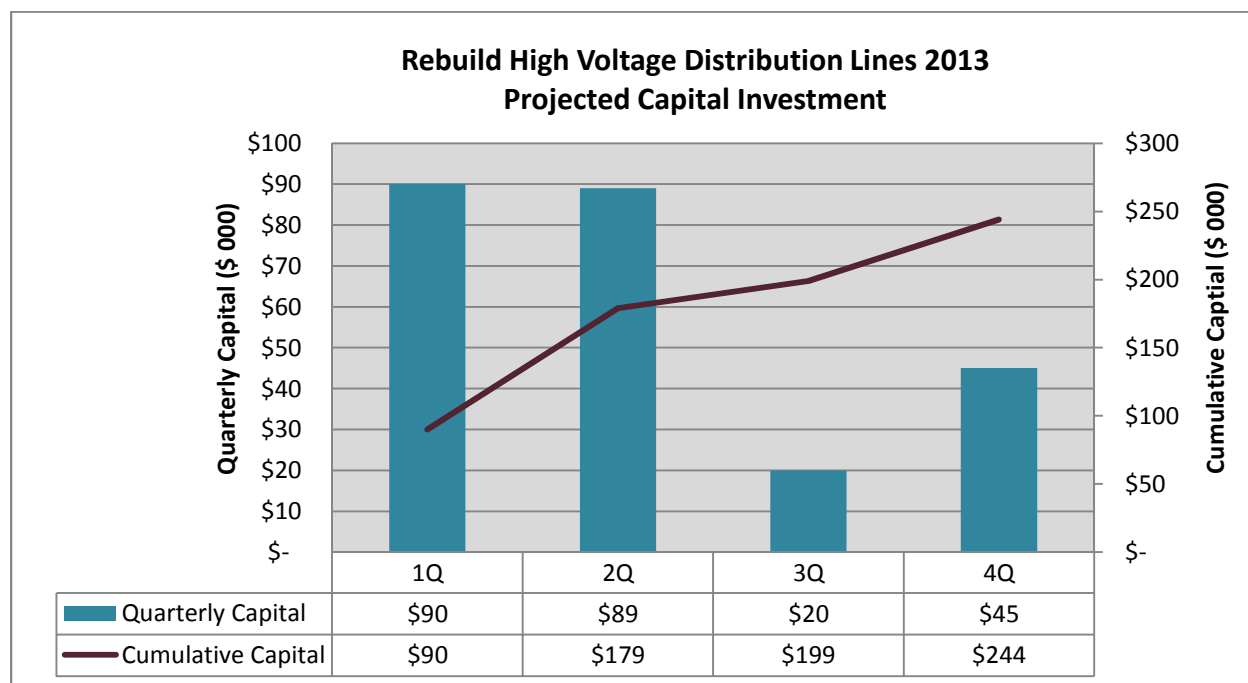
These projects were selected on the basis of:

1. Greatest number of customers
2. Outage history
3. Condition of the facilities
4. System operating parameters
5. Workload management

1.M.2: 2013 Program Capital Investments

Figure 1.M.2 represents the projected 2013 capital expenditures for the Rebuild High Voltage Distribution Lines program. AIC estimates the 2013 program cost to be approximately \$244,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work, may evolve over time.

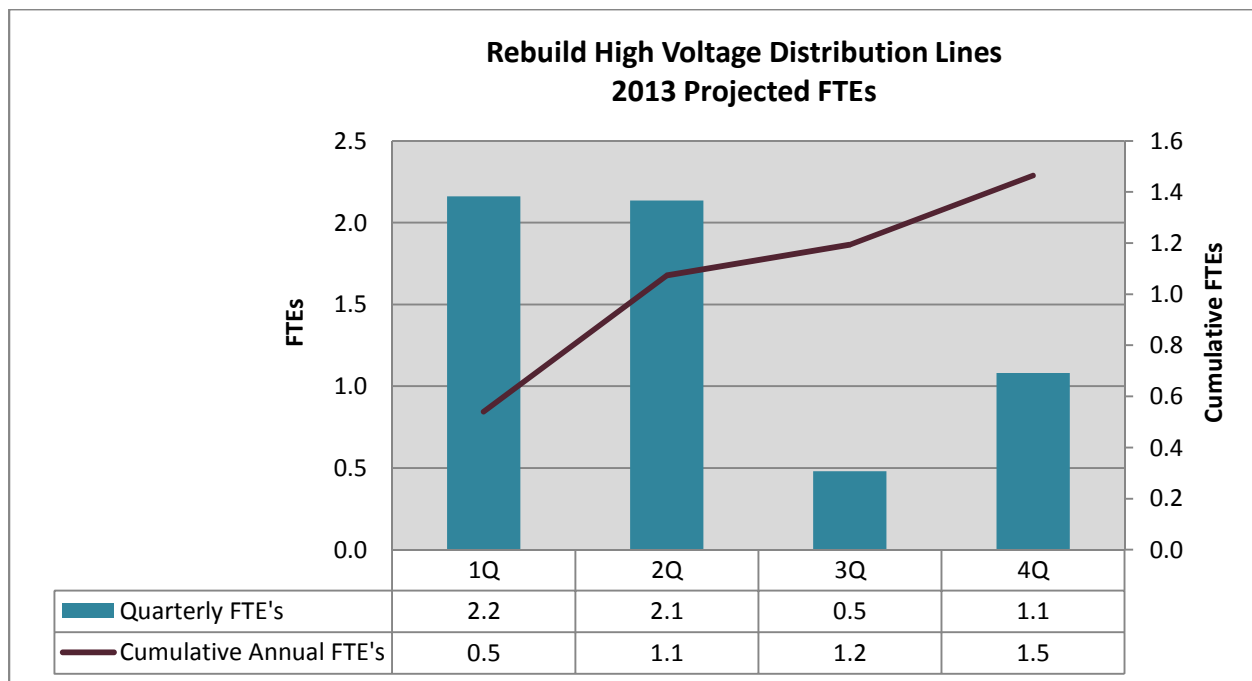
Figure 1.M.2: Rebuild High Voltage Distribution Lines 2013 Capital Investments



1.M.3: 2013 Program FTEs

Figure 1.M.3 represents the projected FTEs required to perform the scheduled scope of work for the Rebuild High Voltage Distribution Lines program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

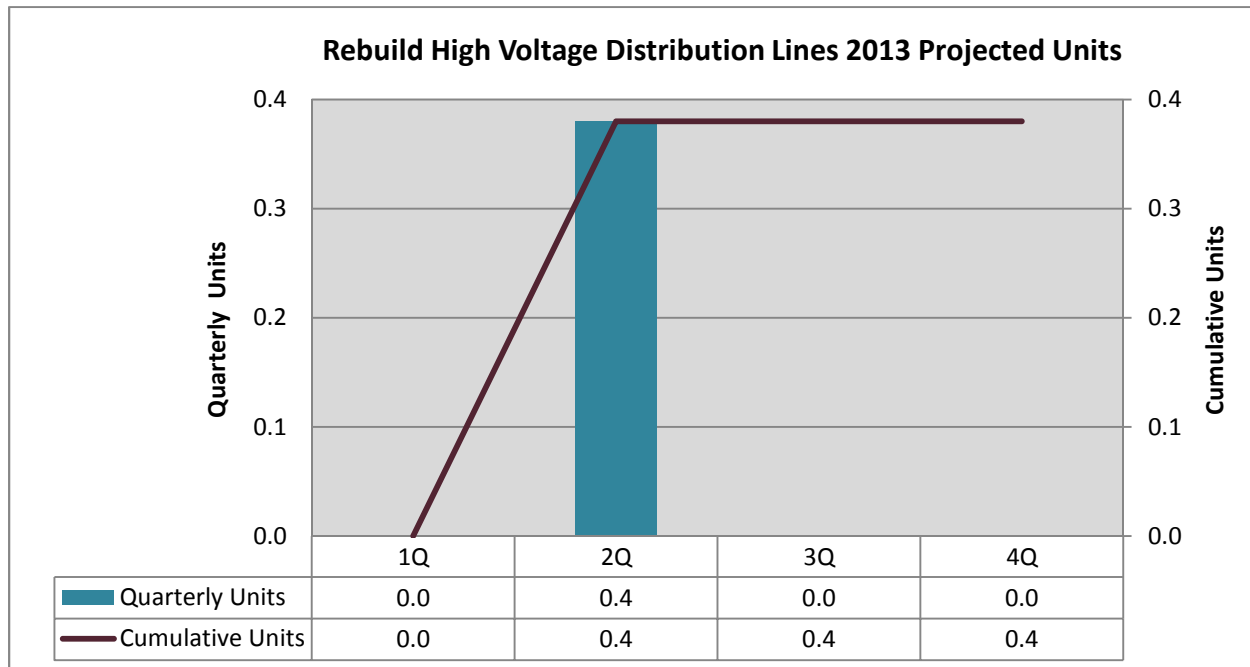
Figure 1.M.3: Rebuild High Voltage Distribution Lines 2013 FTEs



1.M.4: Program Schedule/Units

Figure 1.M.4 shows the miles of Rebuild High Voltage Distribution Lines to be completed in 2013 under this program. This chart will serve as a tracking mechanism over the course of the year, and reflects the scope of work planned to be accomplished as well as the scope of work left to be performed. Estimates of cost, units of work, and schedules for that work may evolve over time. The units shown below are “miles.”

Figure 1.M.4: Rebuild High Voltage Distribution Lines 2013 Units



Section 1.N: Expand Bulk Supply Substations

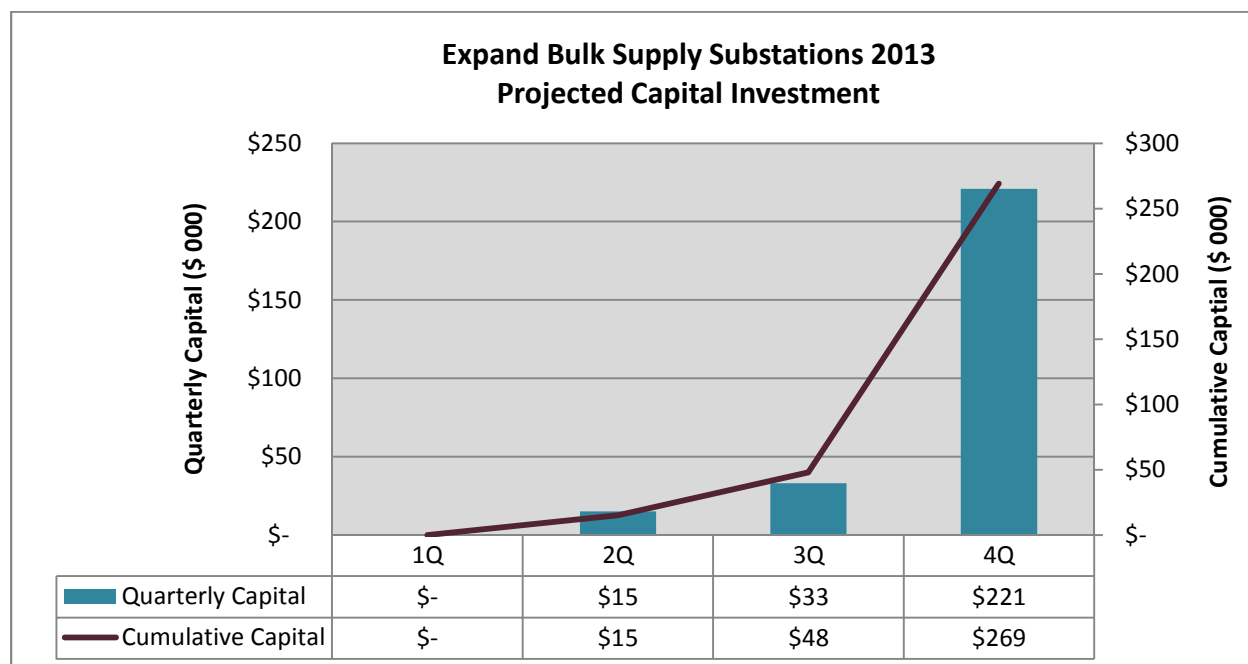
1.N.1: 2013 Program Scope

This program will construct new bulk supply substations (e.g., 161/69 kV, 138/69 kV, and 138/34.5 kV), or install new bulk supply transformers at existing substation locations, and implement associated line and equipment reinforcements. Engineering and site selection for this program will commence in 2013.

1.N.2: 2013 Program Capital Investments

Figure 1.N.2 represents the projected 2013 capital expenditures for the Expand Bulk Supply Substations program. AIC estimates the 2013 program cost to be approximately \$269,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work, may evolve over time.

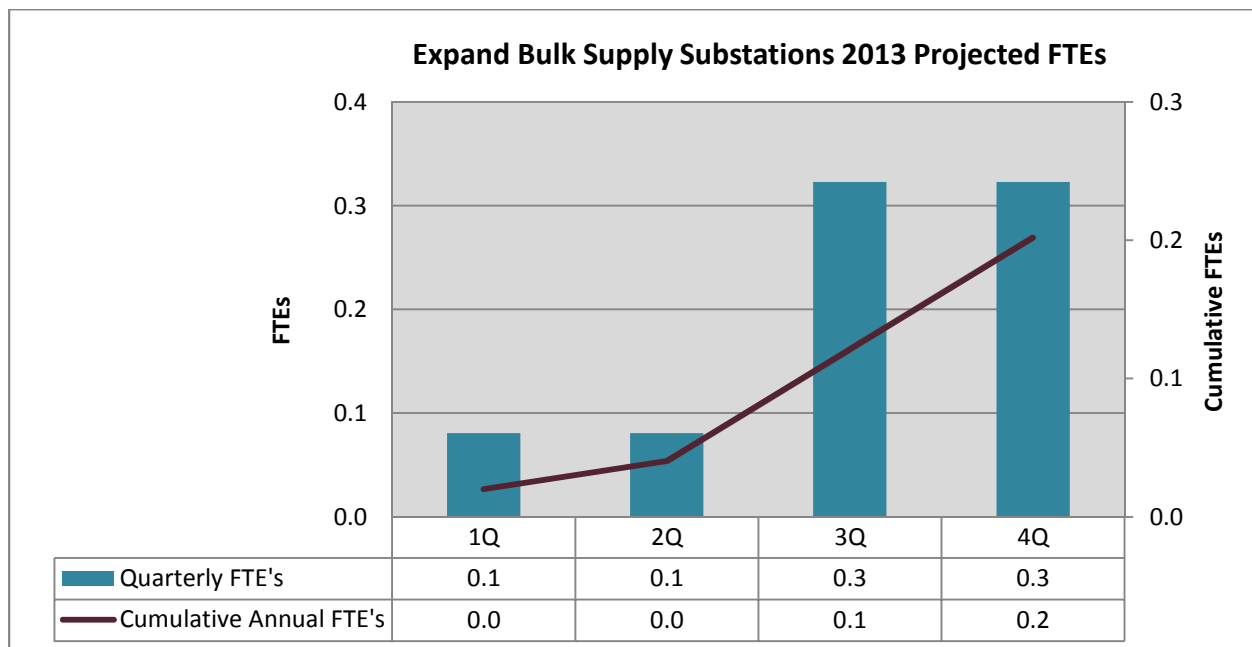
Figure 1.N.2: Expand Bulk Supply Substations 2013 Capital Investments



1.N.3: 2013 Program FTEs

Figure 1.N.3 represents the projected FTEs required to perform the scheduled scope of work for the Rebuild High Voltage Distribution Lines program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 1.N.3: Expand Bulk Supply Substations 2013 FTEs



1.N.4: Program Schedule/Units

Only engineering and material procurement will commence in 2013. No units will be installed.

Section 1.O: Underground Primary Distribution Cable

1.O.1: 2013 Program Scope

This program will replace underground cable in 2013 that has been identified as needing replaced through historical outage information and engineering analysis. These cables may be either individual or multiple cable sections within an underground system.

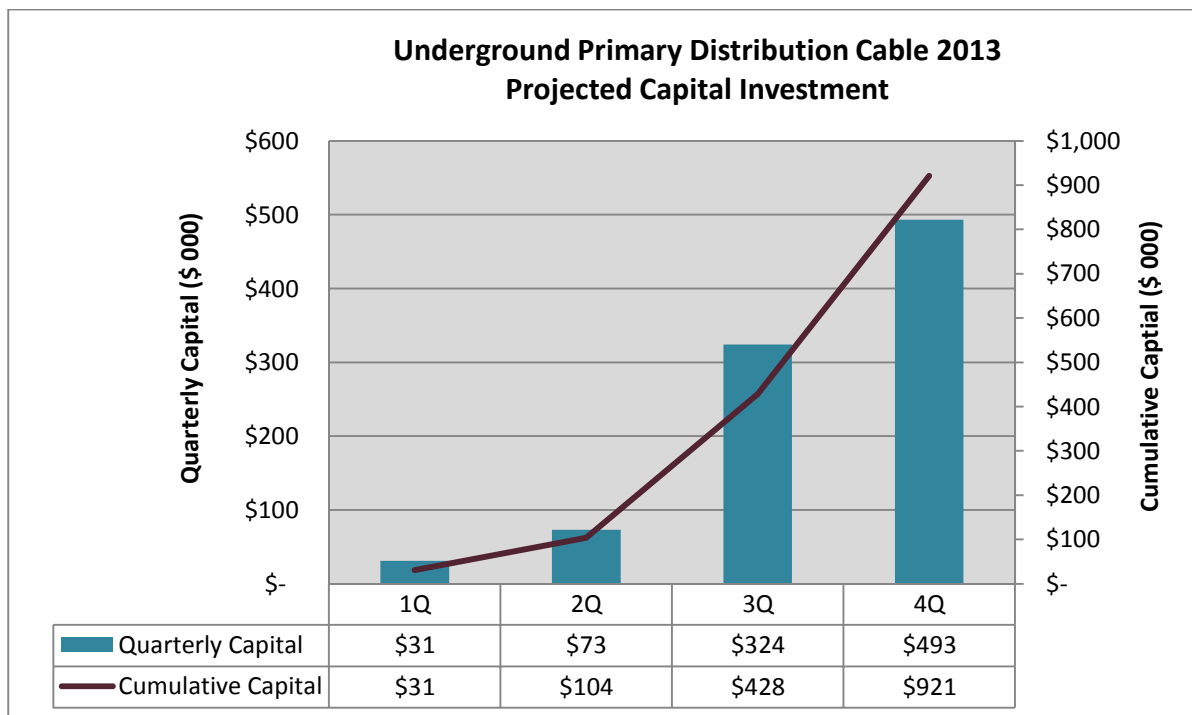
These projects were selected on the basis of:

1. Historical outage information
2. Engineering analysis
3. Greatest number of customers
4. Workload management

1.O.2: 2013 Program Capital Investments

Figure 1.O.2 represents the projected 2013 capital expenditures for the Underground Primary Cable program. AIC estimates the 2013 program cost to be approximately \$921,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

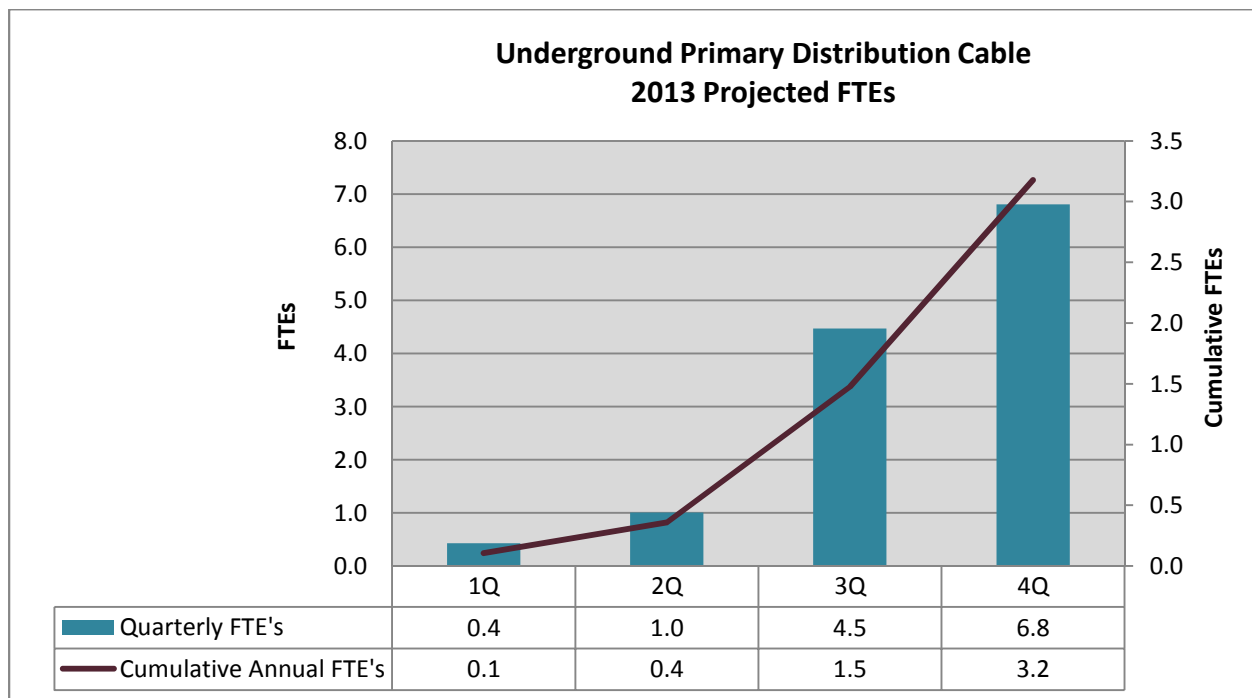
Figure 1.O.2: Underground Primary Distribution Cable 2013 Capital Investments



1.O.3: 2013 Program FTEs

Figure I.O.3 represents the projected FTEs required to perform the scheduled scope of work for the Underground Primary Cable program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

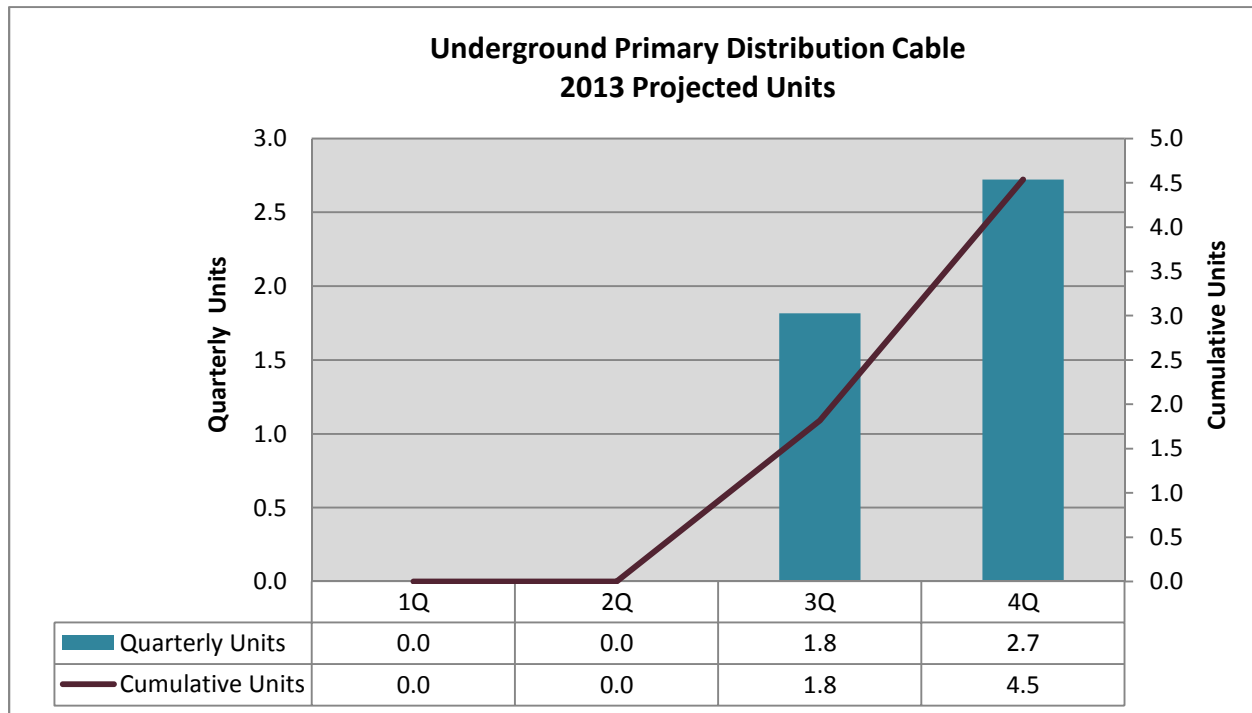
Figure 1.O.3: Underground Primary Distribution Cable 2013 FTEs



1.O.4: Program Units

Figure 1.O.4 shows the miles of Underground Primary Cable to be replaced in 2013 under this program. This chart will serve as a tracking mechanism over the course of the year, and reflects the scope of work planned to be accomplished as well as the scope of work left to be performed. Estimates of cost, units of work, and schedules for that work may evolve over time. The units shown are ‘miles’.

Figure 1.O.4: Underground Primary Distribution Cable Units



Section 1.P: System Tie Primary Distribution

1.P.1: 2013 Program Scope

This program plans to build primary distribution circuits to tie primary distribution circuits together for better operating efficiency and reliability. This could include making distribution ties between adjacent substations, tying “legacy” company circuits together that are in closer proximity, or tying to other utility sources such as Co-Ops and municipalities.

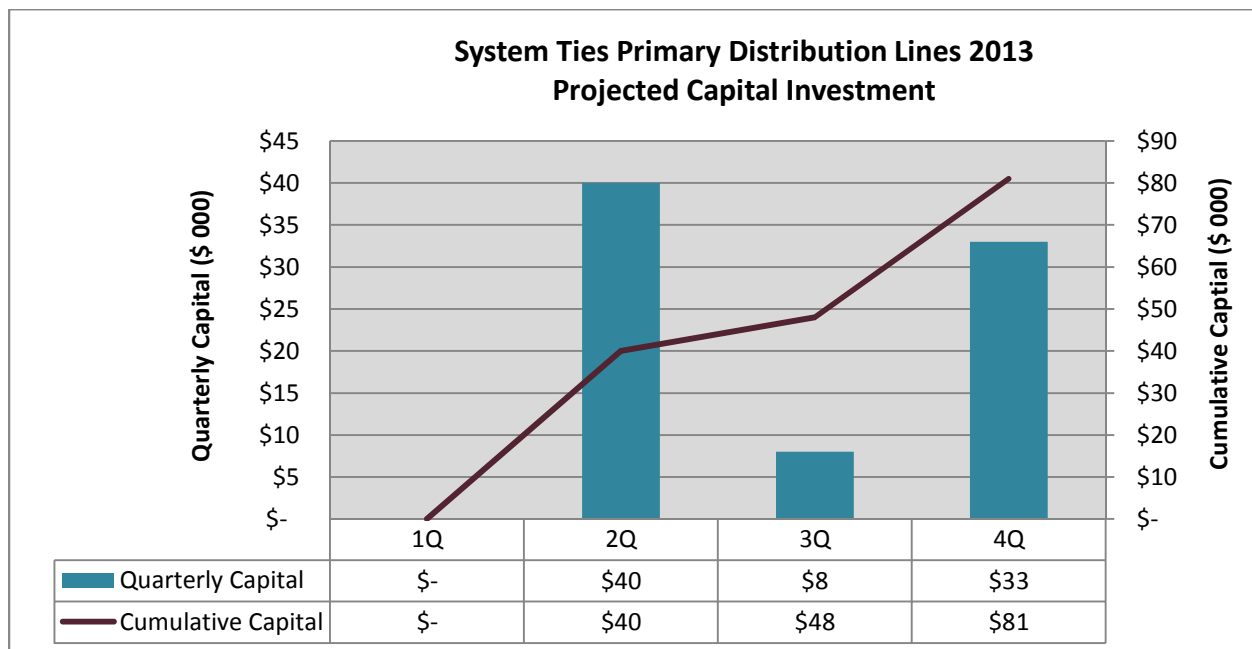
New system ties were selected based on:

1. System benefit
2. Greatest number of customers.
3. Outage history
4. Workload management

1.P.2: 2013 Program Capital Investments

Figure 1.P.2 represents the projected 2013 capital expenditures for the System Tie Primary Distribution program. AIC estimates the 2013 program cost to be approximately \$81,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

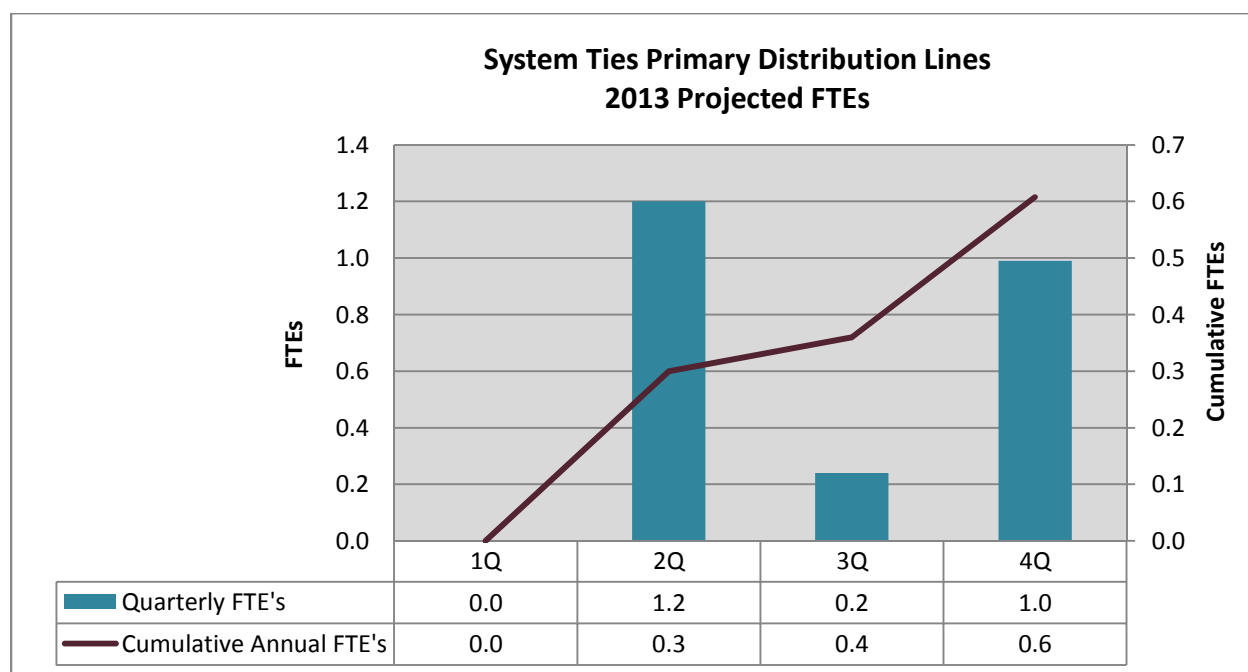
Figure 1.P.2: System Ties Primary Distribution Lines 2013 Capital Investments



1.P.3: 2013 Program FTEs

Figure 1.P.3 represents the projected FTEs required to perform the scheduled scope of work for the System Ties Primary Distribution Lines program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 1.P.3: System Ties Primary Distribution Lines 2013 FTEs



1.P.4: Program Units

The investment in 2013 is for engineering only. There will be no units installed in 2013.

Section 1.Q: CERT Remediation

1.Q.1: 2013 Program Scope

The program specifically targets existing CERT and potential CERT customers that have exceeded the reliability criteria for two consecutive years. These projects may include such items as rebuilding portions of distribution circuits, building new circuit ties, or installation of targeted distribution automation schemes.

These projects were selected on the bases of:

1. Number of existing or potential CERT customers
2. Historical outage information
3. Scope of each individual project
4. Workload management

1.Q.2: 2013 Program Capital Investments

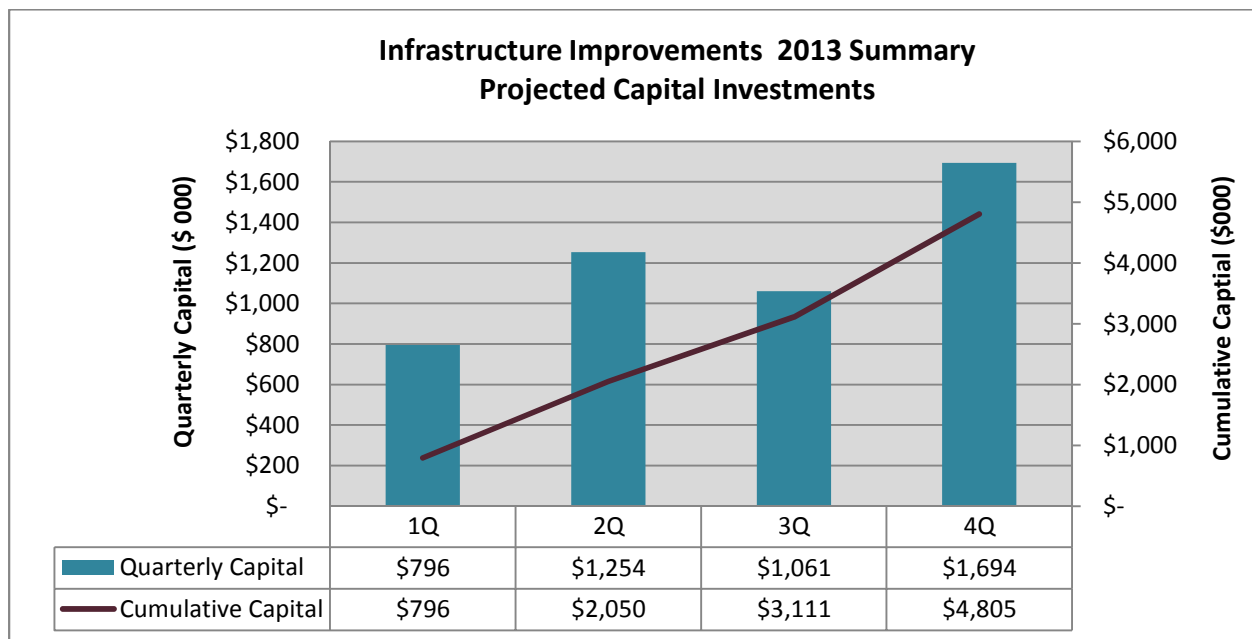
There are no projected capital expenditures expected in this program for 2013.

Section 1.R: Infrastructure Improvement Summary

1.R.1: Summary Capital Expenditures

Figure 1.R.1 represents the projected total capital expenditures for the Infrastructure Improvement programs under the Infrastructure and Modernization portion of the Act, excluding the Training Facilities. The Training Facilities are shown separately. AIC estimates the summary cost to be \$4.8 million in capital investment, plus associated expenses over the program period. Estimates of cost, scope of work, and schedules for that work may evolve over time.

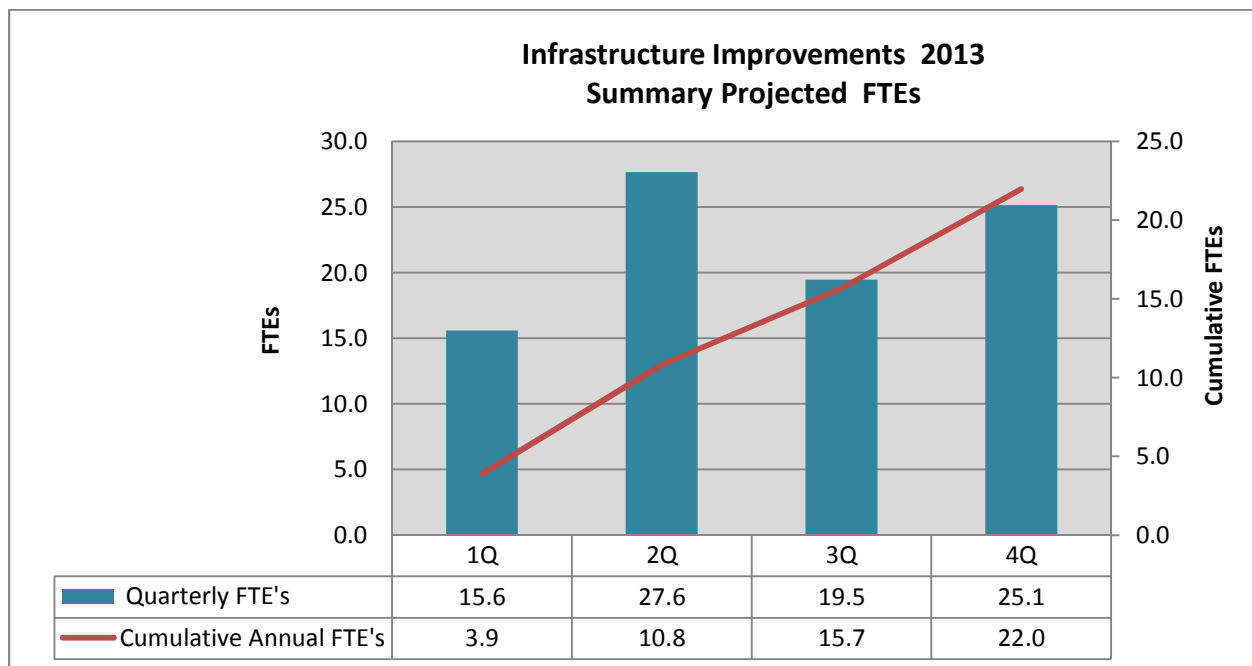
Figure 1.R.1: Infrastructure Improvement Summary 2013 Capital Investments



1.R.2: Program FTEs

Figure 1.R.2 represents the projected FTEs required to perform the scheduled scope of work. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 1.R.2: Infrastructure Improvement Summary 2013 FTEs



Section 2: Training Facilities

Section 2A: Training Facilities

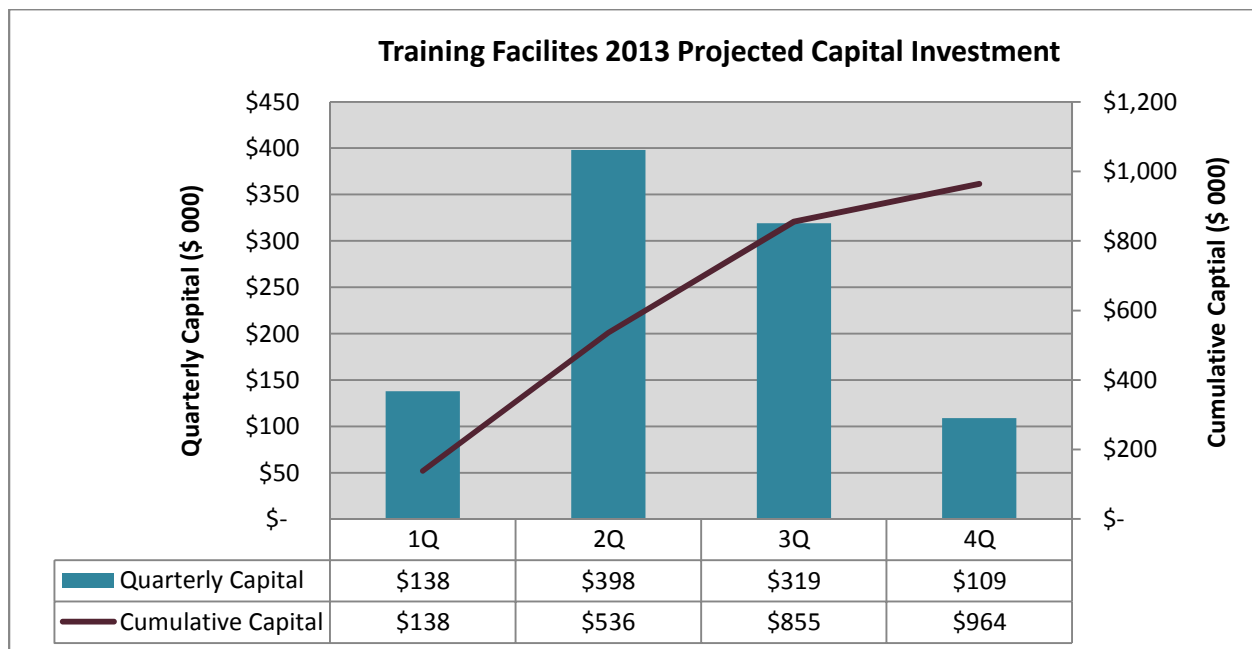
2.A.1: 2013 Program Scope

In 2013, outdoor electric training facilities will be constructed at the Turkey Hill substation. Enhancements will also occur at the Decatur Training Center with the addition of a second meter training room, installation of a second feed to the facility, and construction of a small underground network training system.

2.A.2: 2013 Program Capital Investments

Figure 2.A.2 represents the projected 2013 capital budget for the Training Facilities. AIC projects the 2013 program cost to be approximately \$1.0 million in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

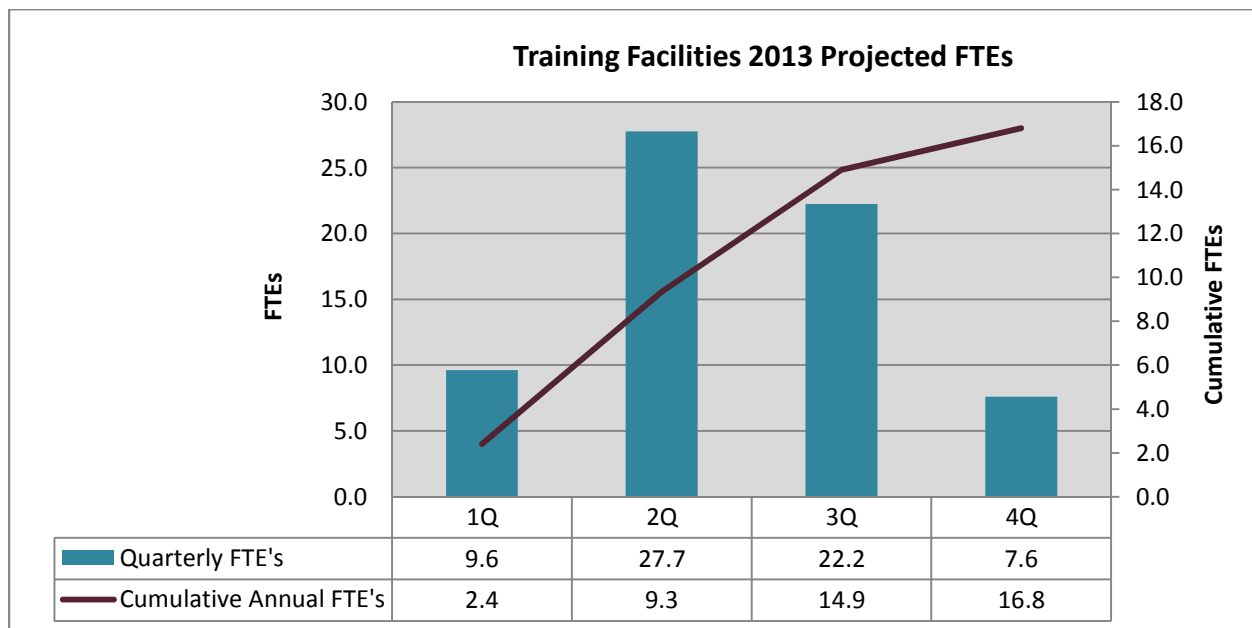
Figure 2.A.2: Training Facilities Capital Investments



2.A.3: 2013 Program FTEs

Figure 2.A.3 represents the projected FTEs required to perform the scheduled scope of work for the Training Facilities program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft. The FTEs below are the projected total to complete construction and operate the new training facilities.

Figure 2.A.3: Training Facilities 2013 FTEs



Section 3: Distribution Automation Programs

Section 3.A: Primary Distribution Automation

3.A.1: 2013 Program Scope

This program is designed to install primary distribution level automation schemes in a self-isolating mode. In some cases smart switching devices will be installed in order to facilitate the automatic isolation of the faulted section and restoration of the remaining load. In addition to installation of the appropriate line devices, this program will install metering and control on the distribution substation equipment if not equipped.

Benefits include, where possible, the limiting of the aggregate load experiencing a permanent outage due to a fault on a primary distribution backbone feeder to approximately half the load of the feeder. In some cases it may also avoid the loss of an entire feeder load due to the loss of supply, such as a substation bus, transformer, or high voltage distribution line.

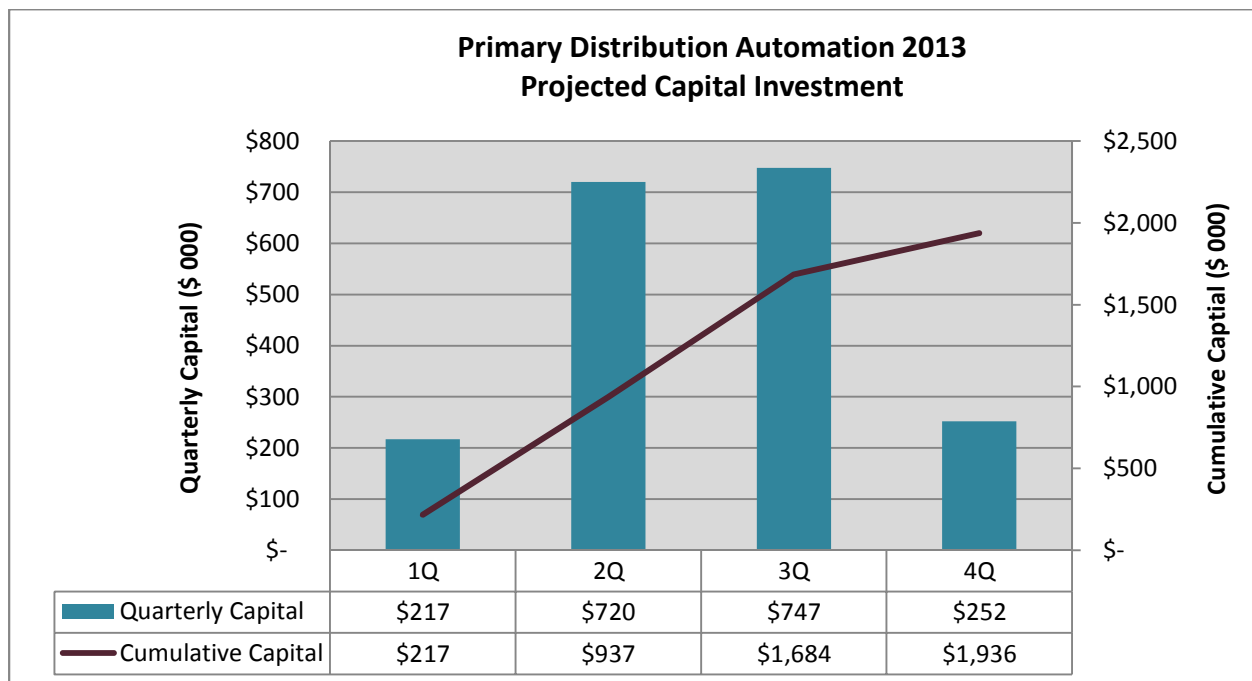
These projects were selected on the basis of:

1. Greatest number of customers
2. Historical outage information
3. Complexity of the project
4. Communication infrastructure requirements
5. Workload management

3.A.2: 2013 Program Capital Investments

Figure 3.A.2 represents the projected 2013 capital expenditures for the Primary Distribution Automation program. AIC estimates the 2013 program cost to be approximately \$2.0 million in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

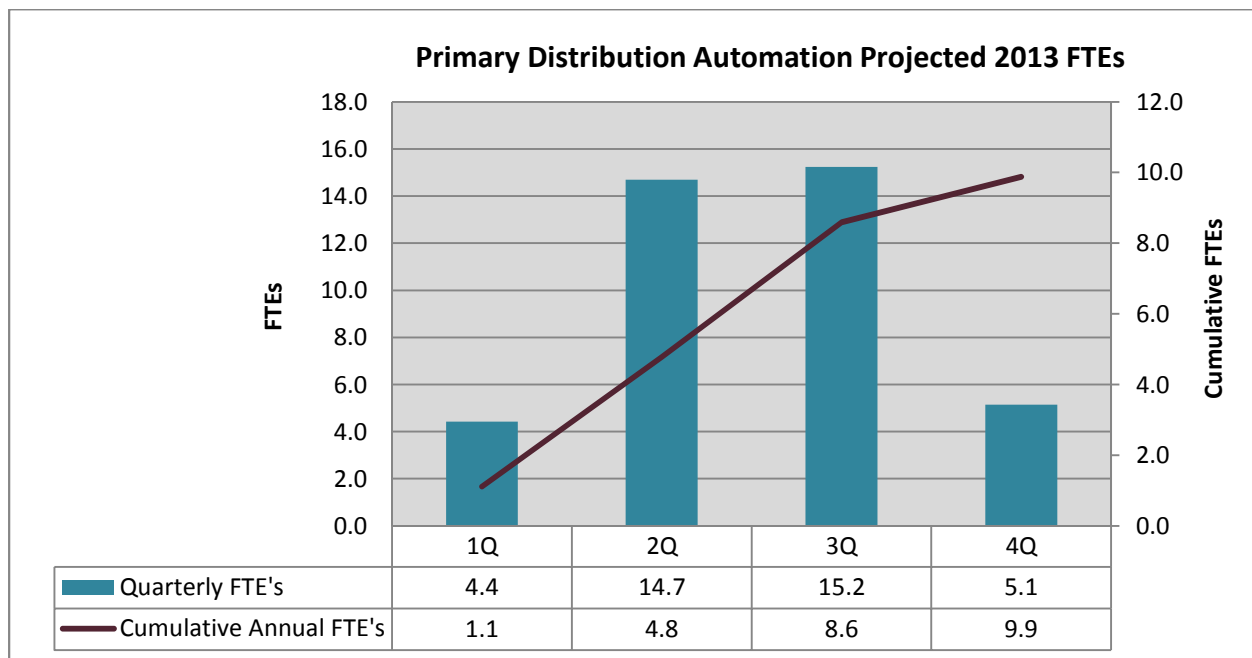
Figure 3.A.2: Primary Distribution Automation 2013 Capital Investments



3.A.3: 2013 Program FTEs

Figure 3.A.3 represents the projected FTEs required to perform the scheduled scope of work for the Primary Distribution Automation program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

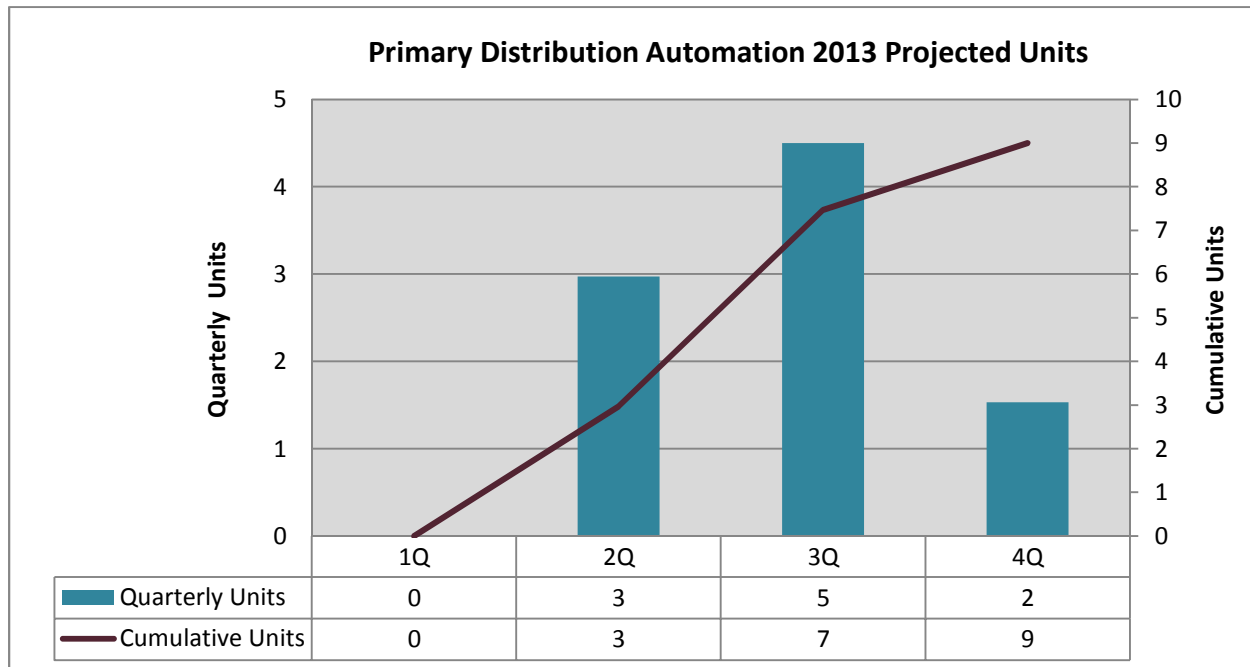
Figure 3.A.3: Primary Distribution Automation 2013 FTEs



3.A.4: Program Schedule/Units

Figure 3.A.4 shows the number of Primary Distribution Automation projects to be completed in 2013 under this program. This chart will serve as a tracking mechanism over the course of the year, and reflects the scope of work planned to be accomplished as well as the scope of work left to be performed. Estimates of cost, units of work, and schedules for that work may evolve over time. The units shown are “projects.”

Figure 3.A.4: Primary Distribution Automation 2013 Units



Section 3.B: Communication Infrastructure

3.B.1: 2013 Program Scope

The AIC's Communications Infrastructure program is foundational to allowing the other Smart Grid programs to obtain their desired benefits. This program will focus on delivering secure, performance-driven communications solution(s). The program will leverage a combination of different communication technologies due to tradeoffs in cost, coverage, bandwidth, latency, reliability, etc. Both public cellular and private RF communications will be converged, as appropriate, onto an Internet Protocol (IP) based architecture.

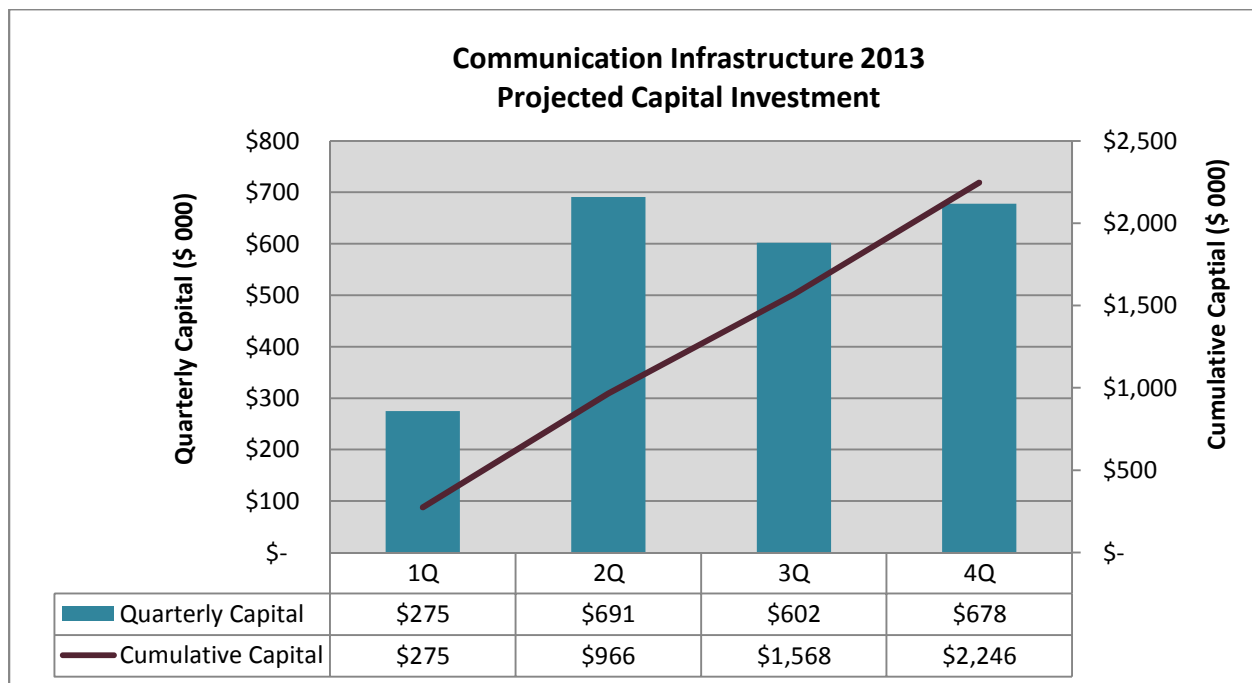
Year 2013 will continue the planning, design and procurement phases for the AIC Smart Grid Communications Network (SGCN). The design and deployment activities will address the core SGCN requirements of performance, security, manageability, upgradeability, and reliability as aligned with the smart grid application(s) being supported. Multi-layered network communications models will incorporate Internet Protocol (IP) services to 1) ensure maximum interoperability based upon current standards that are both available and generally accepted as best practice and 2) to the maximum extent possible, comply with standards that have been deemed relevant by NIST and the SGIP. As mentioned previously, not only will both public and private wireless services be used, but also wired technologies will be leveraged as appropriate to continue to address performance and cyber security requirements, as well as to optimize costs. Cyber security (to include, but not be limited to, the implementation of best-practice security processes, procedures, standards and technologies) will be incorporated from an end-to-end, holistic perspective starting in the initial years of planning, design and deployment. The footprint of the private wireless will be expanded to cover a larger portion of the AIC territory with addition of two new master radio locations. This will reduce overall long-term cost and increase responsiveness to provide secure control for field DA control applications. Newer high-

bandwidth wireless technologies are being explored that will provide low latency communication and the ability to handle additional capacity such as video surveillance. Also, being reviewed is how the Network Operations Center (NOC) will be enhanced to provide service to a larger footprint in monitoring increased network communications end points as well as the addition of AMI communications infrastructure.

3.B.2: 2013 Program Capital Investments

Figure 3.B.2 represents the projected 2013 capital expenditures for the Communication Infrastructure program. AIC estimates the 2013 program cost to be approximately \$2.2 million in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

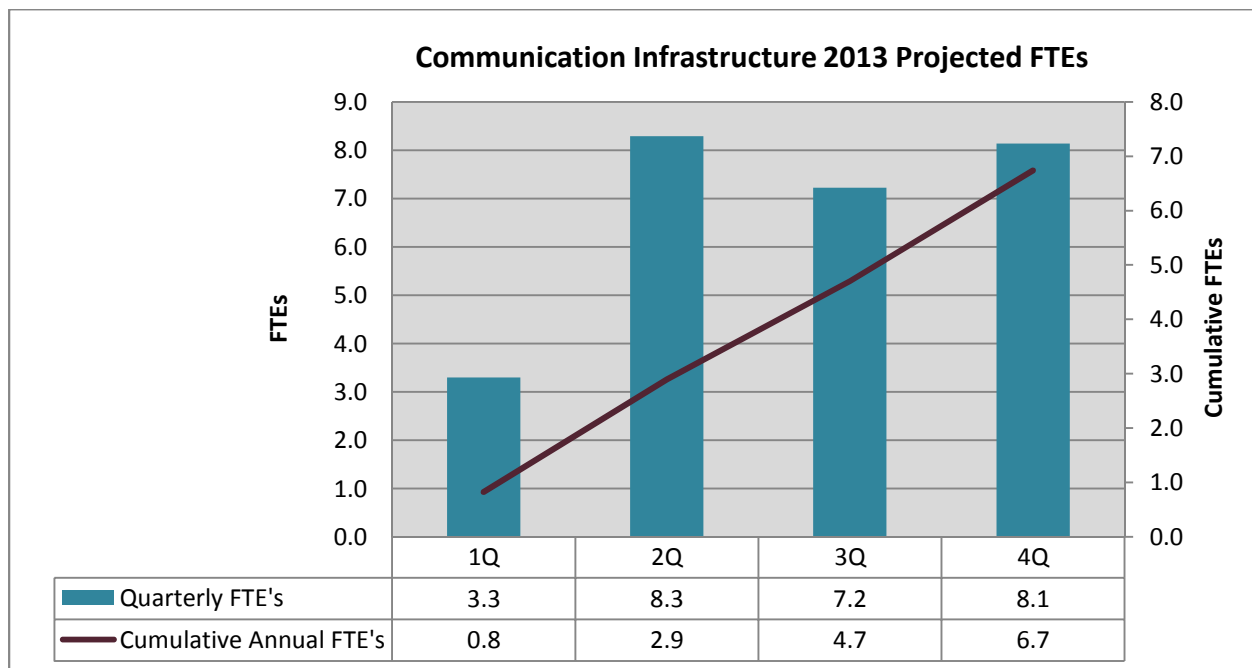
Figure 3.B.2: Communication Infrastructure 2013 Capital Investments



3.B.3: 2013 Program Schedule/FTEs

Figure 3.B.3 represents the projected FTEs required to perform the scheduled scope of work for the Communication Infrastructure program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 3.B.3: Communication Infrastructure 2013 FTEs



Section 3.C: High Voltage Distribution Relaying

3.C.1: 2013 Program Scope

This program is to replace obsolete electro-mechanical relays on the high voltage distribution system with microprocessor based relays. Some of the expected benefits are

1. Provide distance to fault data to system control to accelerate outage restoration
2. Relay health status continuously monitored by SCADA
3. Detailed fault data for post disturbance evaluation
4. Reduced maintenance due to longer testing intervals.

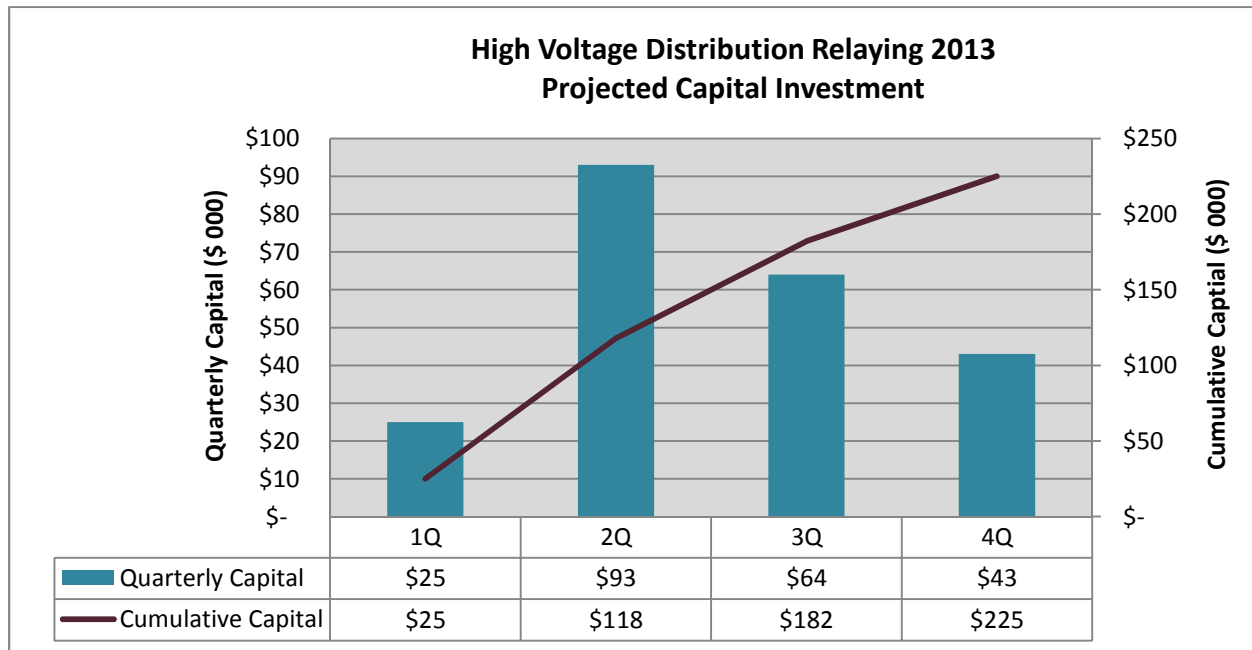
Project selection is based on.

1. Historical performance.
2. Greatest number of customers
3. Complexity of project
4. Workload management

3.C.2: 2013 Program Capital Investments

Figure 3.C.2 represents the projected 2013 capital expenditure for the High Voltage Distribution Relaying program. AIC estimates the 2013 program cost to be approximately \$225,000 in capital investment, plus associated expenses. The 2013 investment is for engineering of 2014 projects. Estimates of cost, units of work, and schedules for that work may evolve over time.

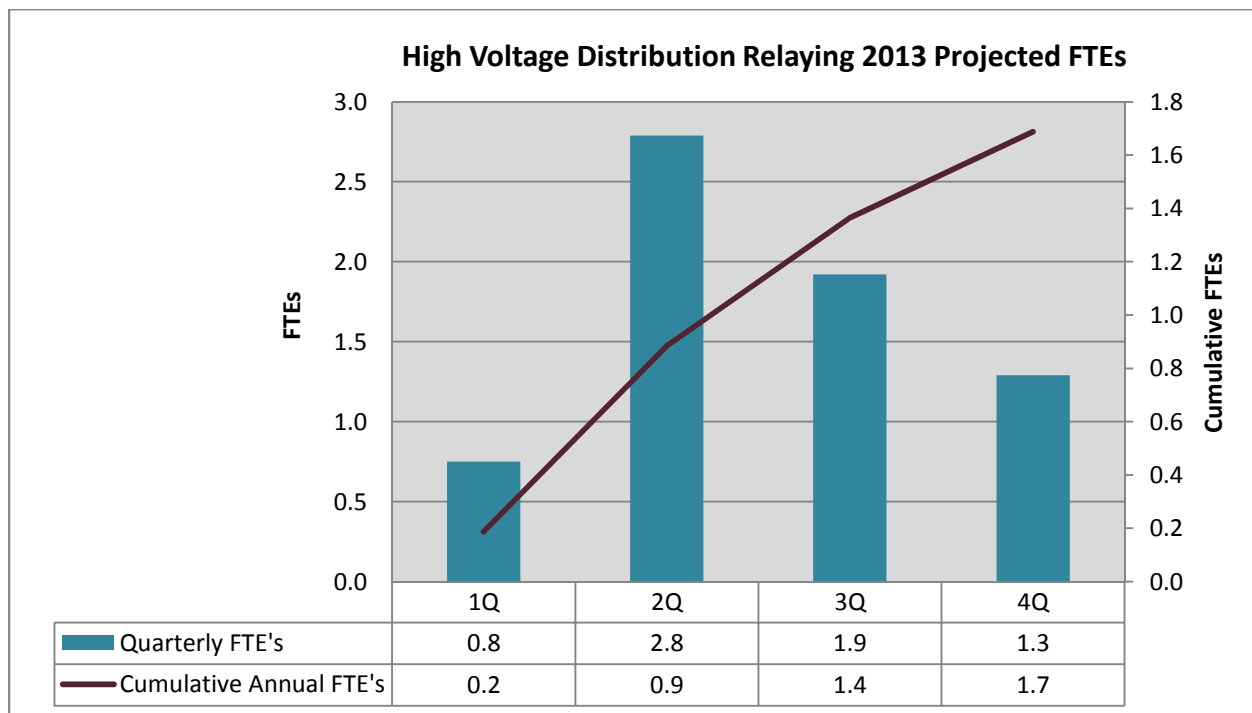
Figure 3.C.2: High Voltage Distribution Relaying 2013 Capital Investments



3.C.3: 2013 Program FTEs

Figure 3.C.3 represents the projected FTEs required to perform the scheduled scope of work for the High Voltage Distribution Relaying program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 3.C.3: High Voltage Distribution Relaying 2013 FTEs



3.C.4: Program Schedule/Units

There are no units projected to be replaced under this program in 2013.

Section 3.D: Distribution Substation Metering

3.D.1: 2013 Program Scope

This program will add distribution substation transformer and circuit load metering at select substations that currently do not have remote read capability. These meters will be remotely read and reported through the SCADA system. Benefits include the collection of accurate and timely load information for operations and planning functions and the elimination of manual metering reading at remote locations.

3.D.2: 2013 Program Capital Investments

There is no projected capital investment in this program in 2013.

Section 3.E: High Voltage Distribution Automation

3.E.1: 2013 Program Scope

This program will install smart switching devices on the high voltage distribution system in order to facilitate the automatic isolation of faulted line sections and the restoration of the remaining loads. It also includes the installation of remote fault indicators (RFI) at select locations to help identify fault location. Benefits include a reduction in the amount of customers experiencing an extended outage, and faster fault location.

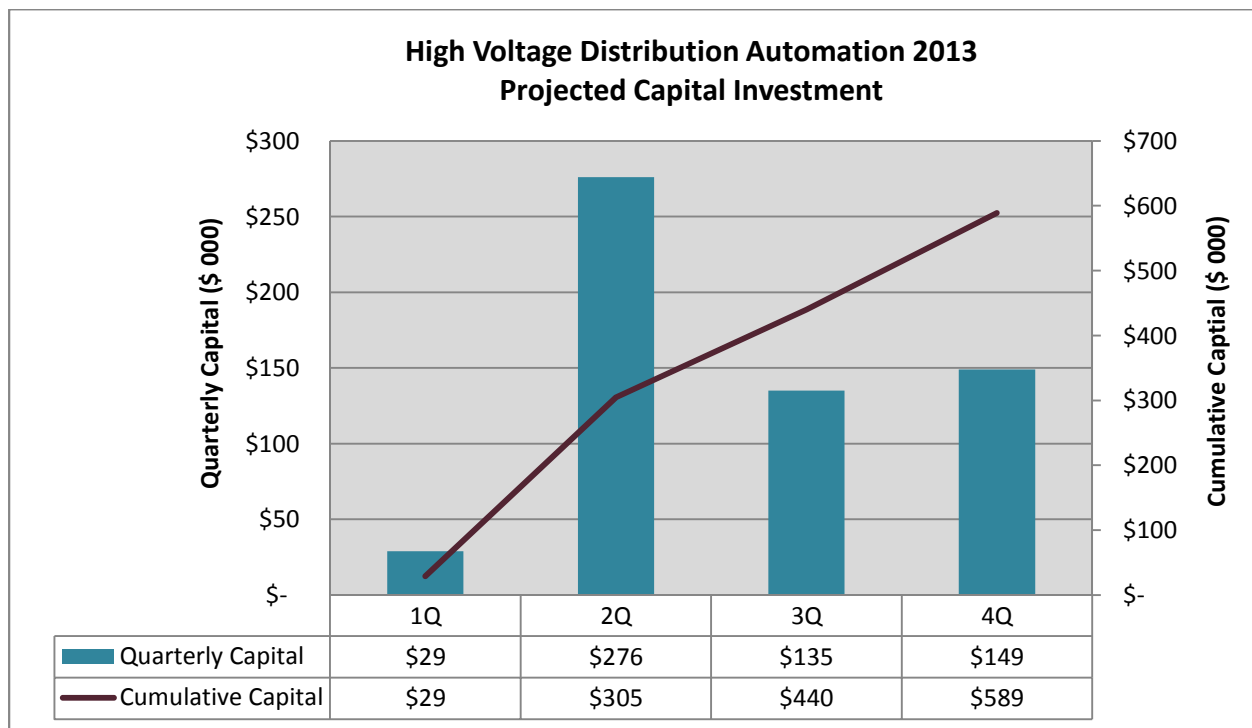
Projects were selected on the basis of:

1. Greatest number of customers
2. Circuit configuration
3. System benefit
4. Historical outage information
5. Communication availability
6. Available resources

3.E.2: 2013 Program Capital Investments

Figure 3.E.2 represents the projected 2013 capital investment for the High Voltage Distribution Automation program. AIC estimates the 2013 program cost to be approximately \$589,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

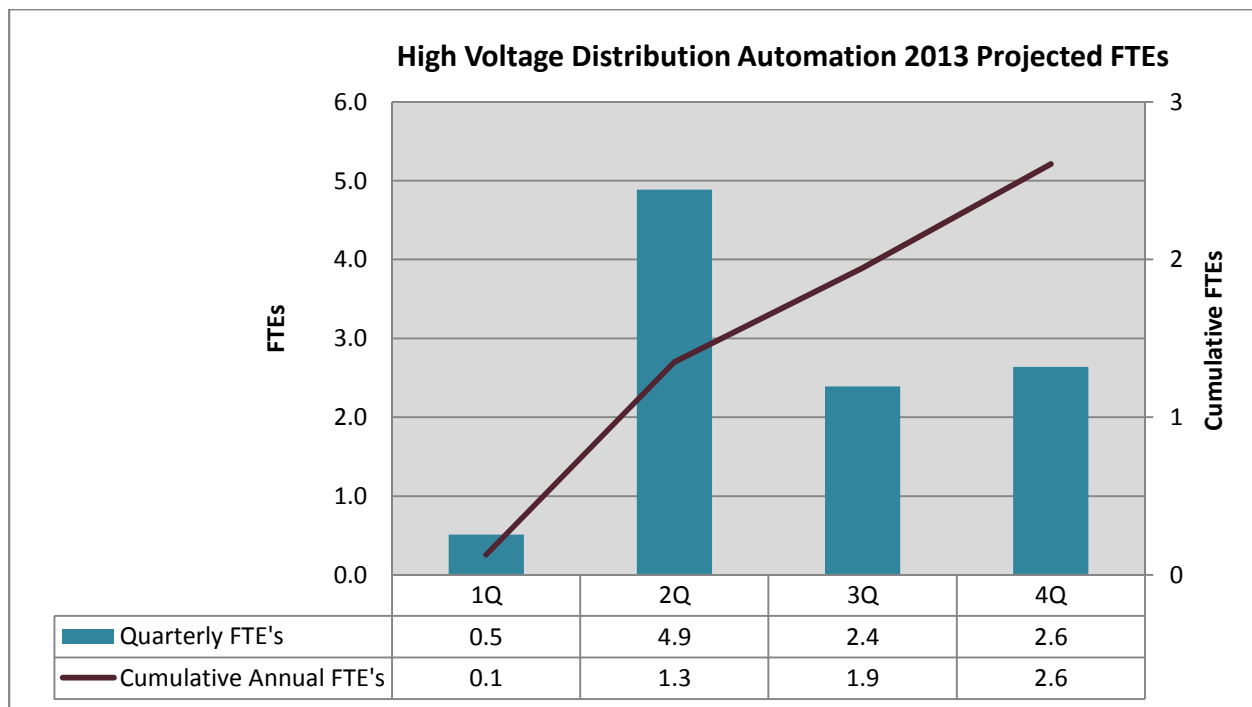
Figure 3.E.2: High Voltage Distribution Automation 2013 Capital Investments



3.E.3: 2013 Program FTEs

Figure 3.E.3 represents the projected FTEs required to perform the scheduled scope of work for the High Voltage Distribution Automation program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

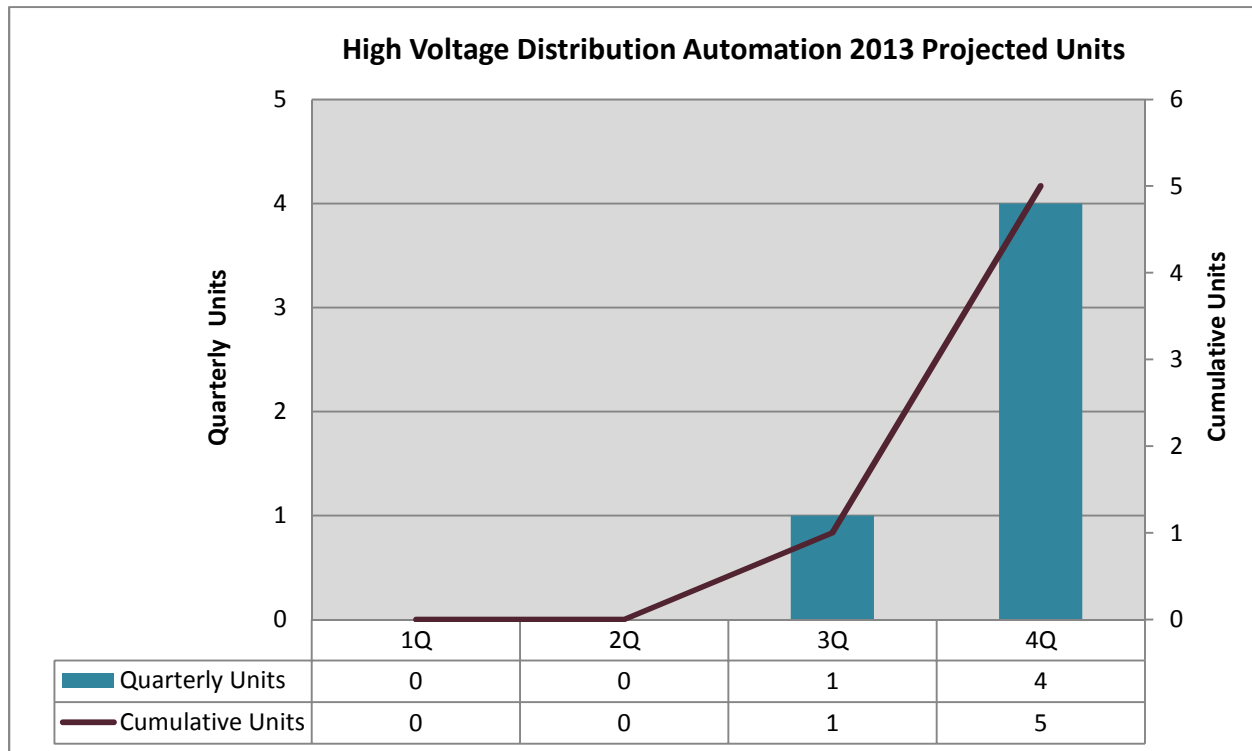
Figure 3.E.3: High Voltage Distribution Automation 2013 FTEs



3.E.4: Program Units/Schedule

Figure 3.E.4 shows the number of High Voltage Distribution Automation projects to be completed in 2013 under this program. This chart will serve as a tracking mechanism over the course of the year, and reflects the scope of work planned to be accomplished as well as the scope of work left to be performed. Estimates of cost, units of work, and schedules for that work may evolve over time. The units shown below are projects.

Figure 3.E.4: High Voltage Distribution Automation 2013 Units



Section 3.F: Test Bed

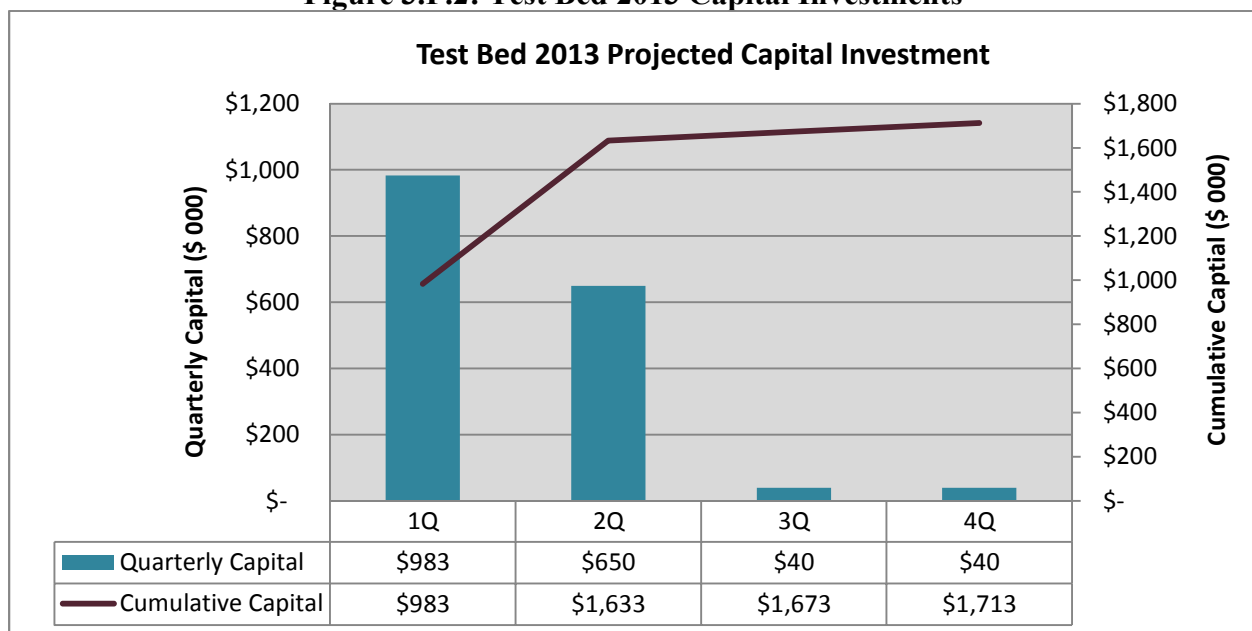
3.F.1: 2013 Program Scope

In 2013, this program will complete the remaining construction activities on the Test Bed Facility. This includes the remaining activities associated with the engineering design related to network communications, materials and tools, and the construction activities associated with the substation, control building, 69kV line extension, 12kV distribution installation, and system tools.

3.F.2: 2013 Program Capital Investments

Figure 3.F.2 represents the projected 2013 capital investment for the Test Bed program. AIC estimates the 2013 program cost to be approximately \$1.7 million in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

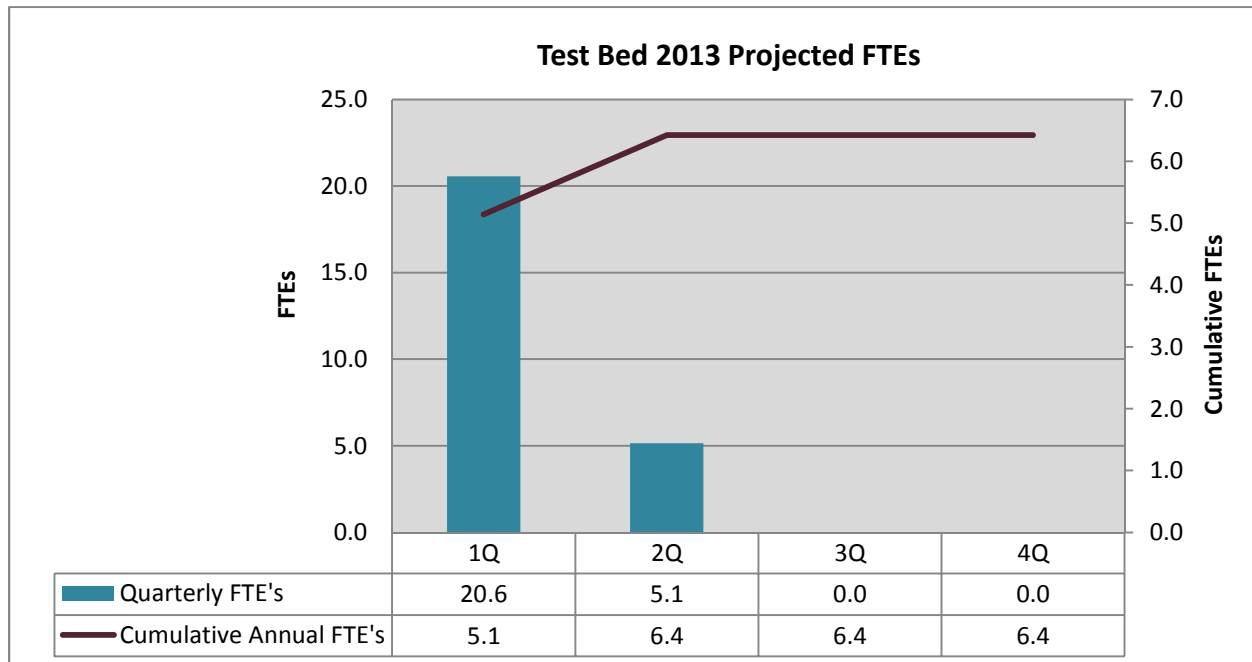
Figure 3.F.2: Test Bed 2013 Capital Investments



3.F.3: 2013 Program FTEs

Figure 3.F.3 represents the projected FTEs required to perform the scheduled scope of work for the Test Bed program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft. The FTEs shown below include the manpower to both construct and operate the Test Bed.

Figure 3.F.3: Test Bed 2013 FTEs

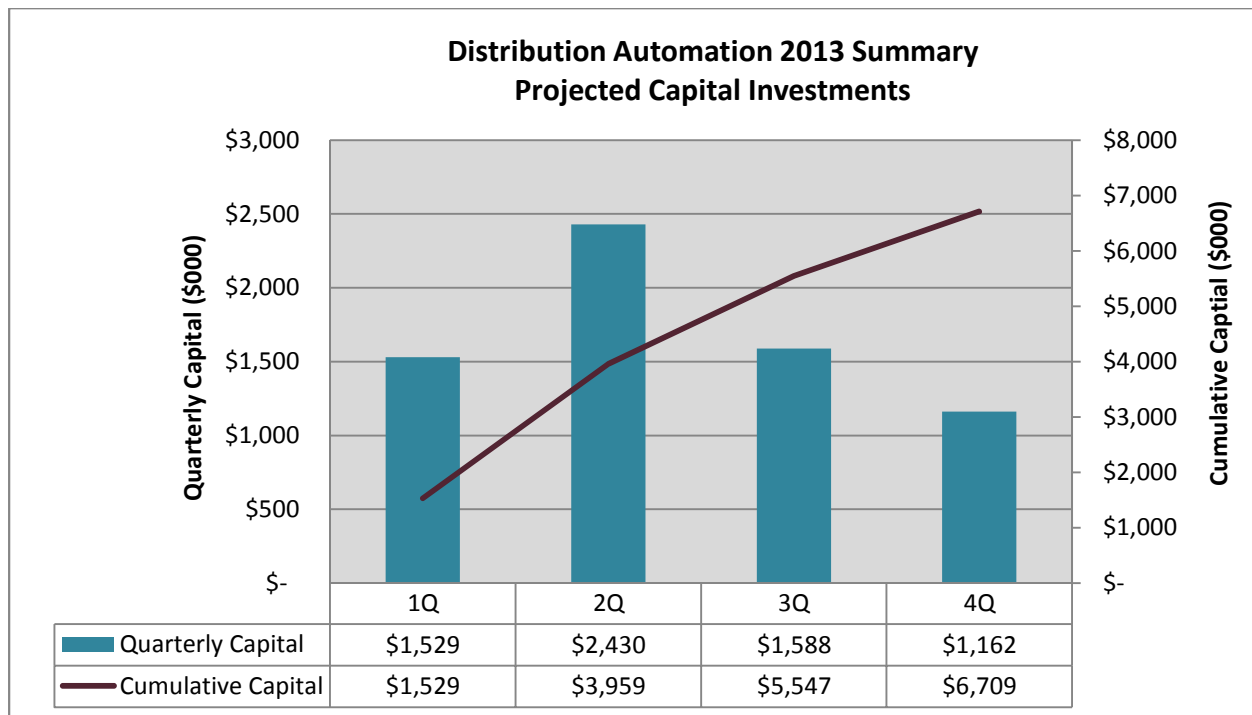


Section 3.G: Distribution Automation Summary

3.G.1: Summary Budget

Figure 3.G.1 represents the projected capital budget for the Distribution Automation portion of the Act's Smart Grid investment. It does not include the AMI program. AIC estimates the program cost to be \$6.7 million in capital investment, plus associated expenses over the program period. Estimates of cost, and scope of work, and schedules for that work, may evolve over time.

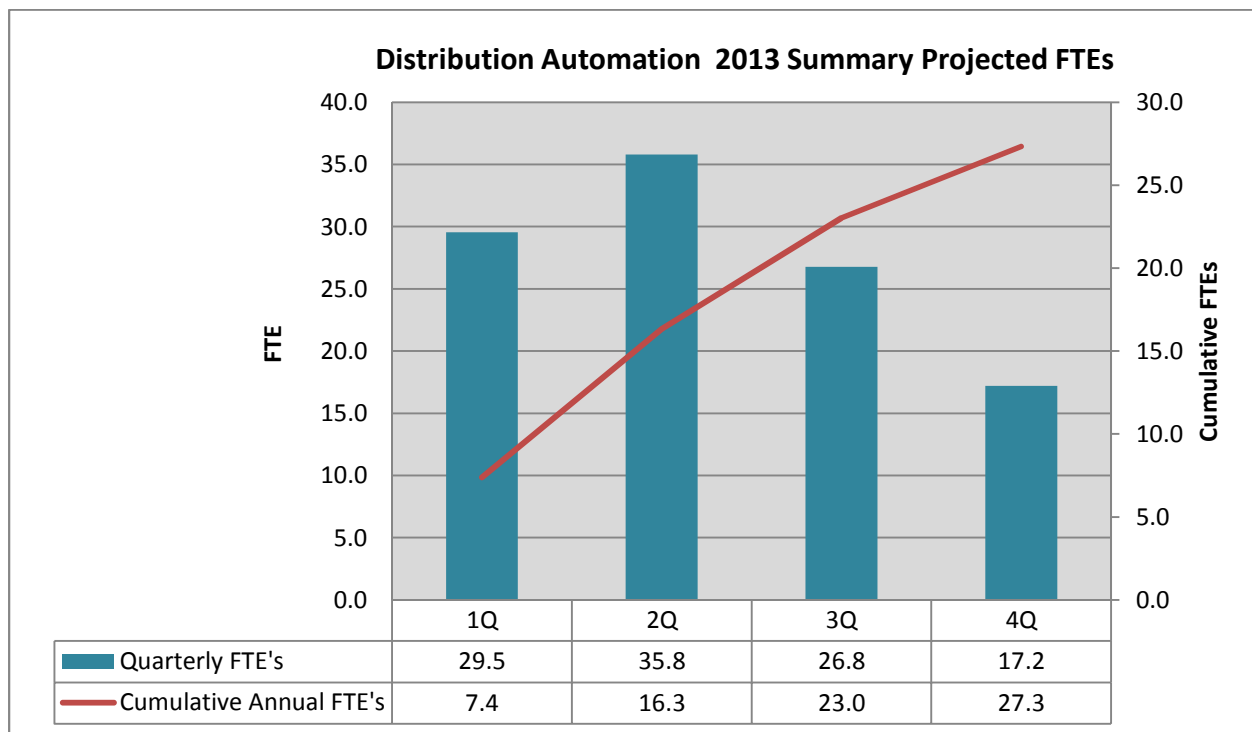
Figure 3.G.1: Distribution Automation 2013 Summary Capital Investments



3.G.2: Summary FTEs

Figure 3.G.2 represents the projected FTEs required to perform the scheduled scope of work. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 3.G.2: Distribution Automation 2013 Summary FTEs



Section 4: Advanced Metering Infrastructure (AMI)

4.A.1: 2013 Program Scope

The 2013 AMI Plan objectives are:

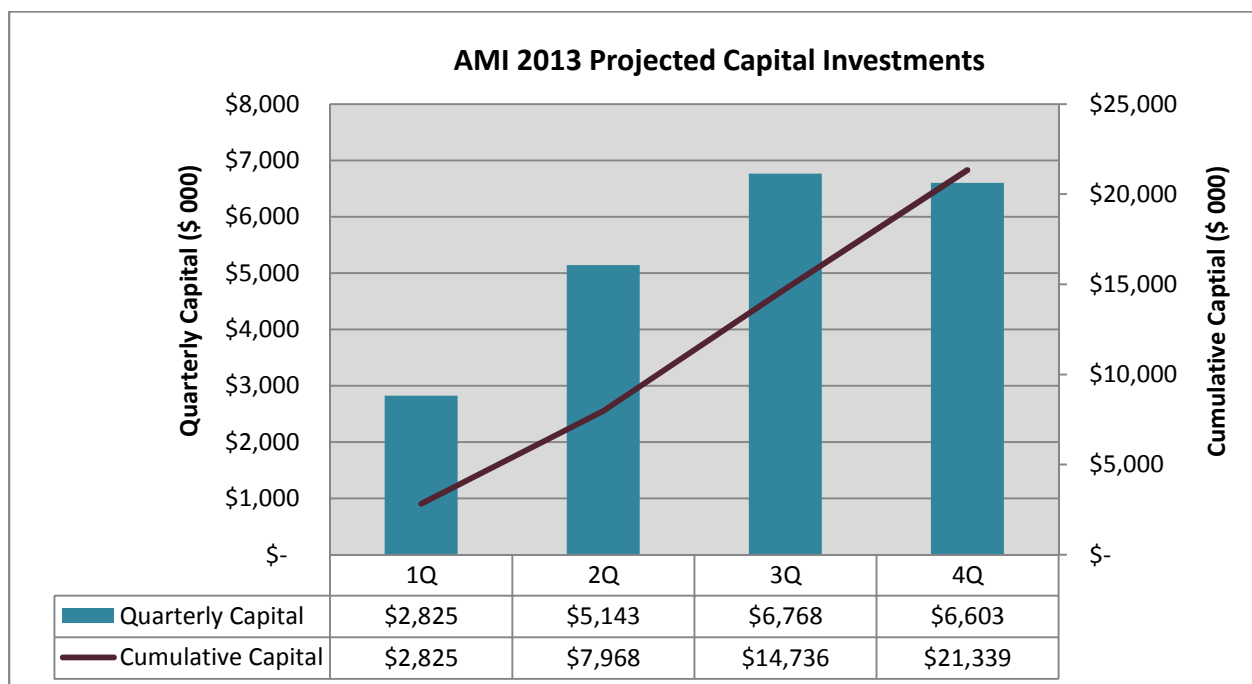
1. Partner with a consultant to do System Integration of interconnected IT systems.
2. Make preparations for deployment by deploying back-end IT infrastructure and initial network deployment for the first meter rollout scheduled for 2013.
3. Continue to execute Consumer Education Plan.

There are no meters projected to be installed in 2013. A more detailed description can be found in the most recent AMI Plan as filed with the ICC, and in the AMI Plan update report submittal..

4.A.2: 2013 Program Capital Investments

Figure 4.A.2 represents the projected 2013 capital expenditures for the AMI program. AIC estimates the 2013 program cost to be approximately \$21.3 million in capital investment, plus associated expenses. The capital expenditures for 2013 listed below assume that gas AMI is approved as part of the 2013 Gas Rate Case filed by Ameren in January 2013. If gas AMI is not approved, the network and IT costs that would have been allocated to gas customers will be borne by electric customers. The allocation for gas in 2013 is approximately \$6 million. Estimates of cost, units of work, and schedules for that work may evolve over time.

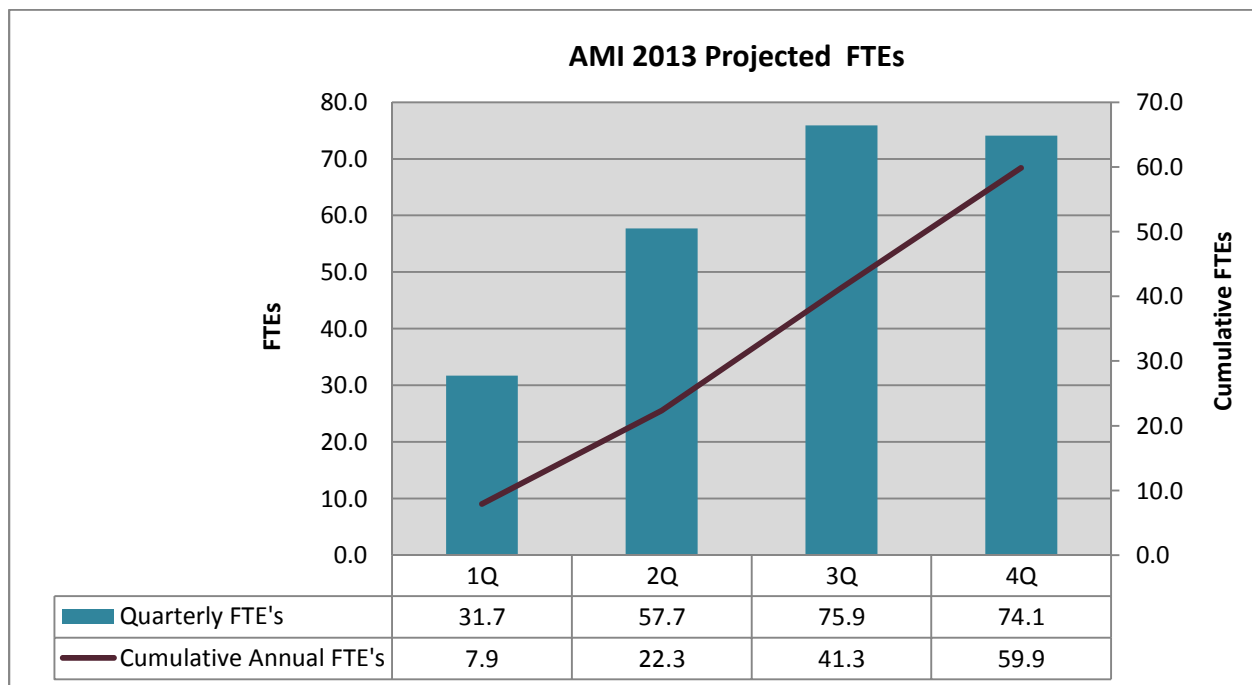
Figure 4.A.2: AMI 2013 Capital Investments



4.A.3: 2013 Program FTEs

Figure 4.A.3 represents the projected FTEs required to perform the scheduled scope of work for the AMI program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 4.A.3: AMI 2013 FTEs



4.A.4: Program Units/Schedule

There are no AMI meters projected to be installed in 2013.

Section 5: Volt/Var Optimization

Section 5.A: High Voltage Volt/Var Control

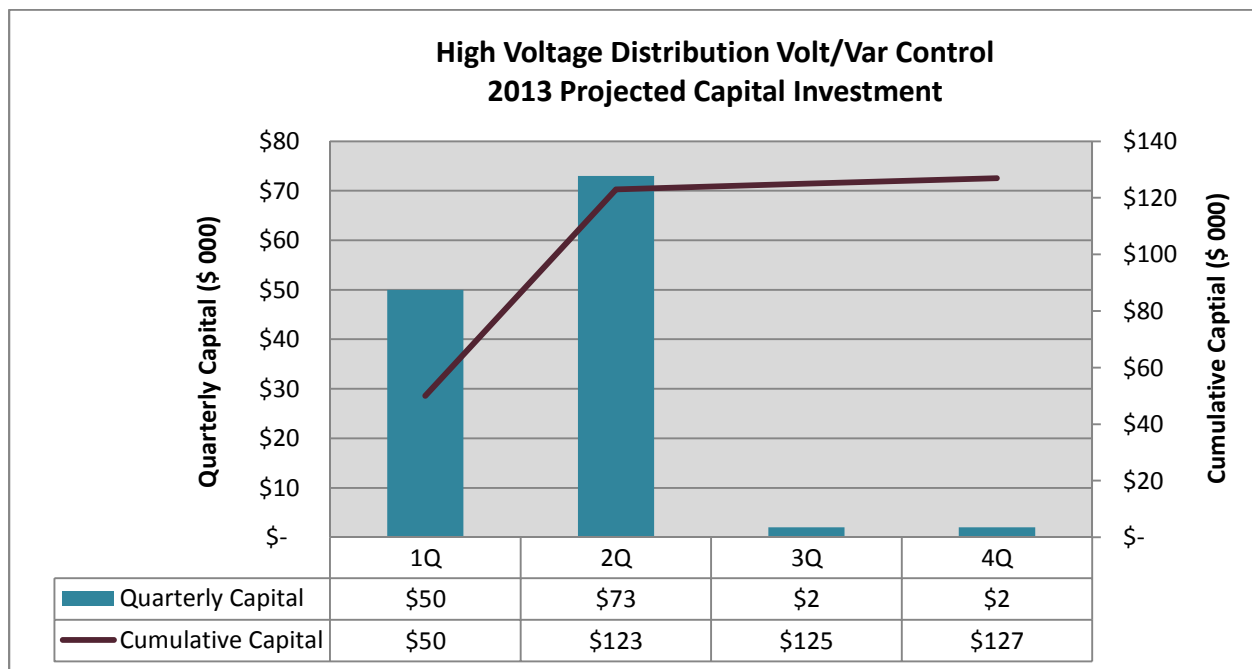
5.A.1: 2013 Program Scope

The intent of this program is to provide dynamic voltage control and optimal reactive power flow across the high voltage distribution system. Benefits include reducing energy losses due to circulating network flows and provide reduced voltage reductions to support optimal use of the system. The initial focus is on insuring all switched high voltage distribution capacitors have SCADA control and voltage indication as part of their intelligence.

5.A.2: 2013 Program Capital Investments

Figure 5.A.2 represents the projected 2013 capital expenditures for the High Voltage Volt/Var program. AIC estimates the 2013 program cost to be approximately \$127,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

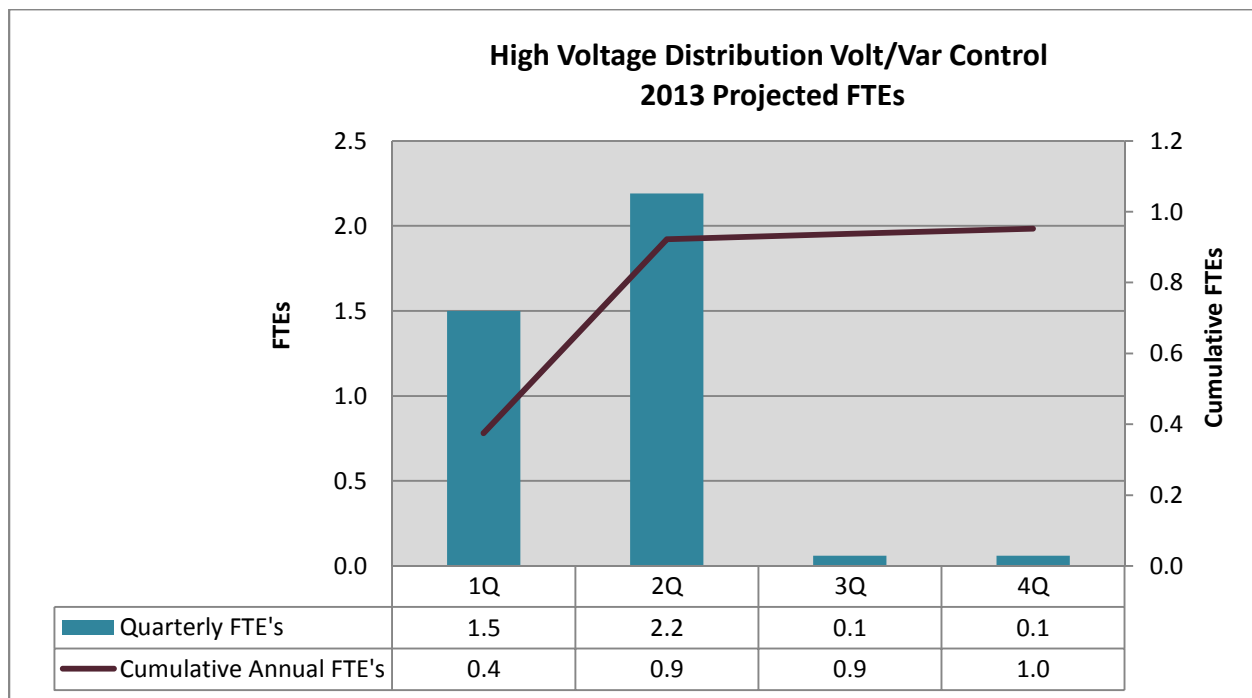
Figure 5.A.2: High Voltage Volt/Var Control 2013 Capital Investments



5.A.3: 2013 Program FTEs

Figure 5.A.3 represents the projected FTEs required to perform the scheduled scope of work for the High Voltage Volt/Var program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 5.A.3: High Voltage Volt/Var Control 2013 FTEs



5.A.4: Program Units

The investment in 2013 is for engineering only. There are no units projected to be installed.

Section 5.B. Primary Distribution Volt/Var Control

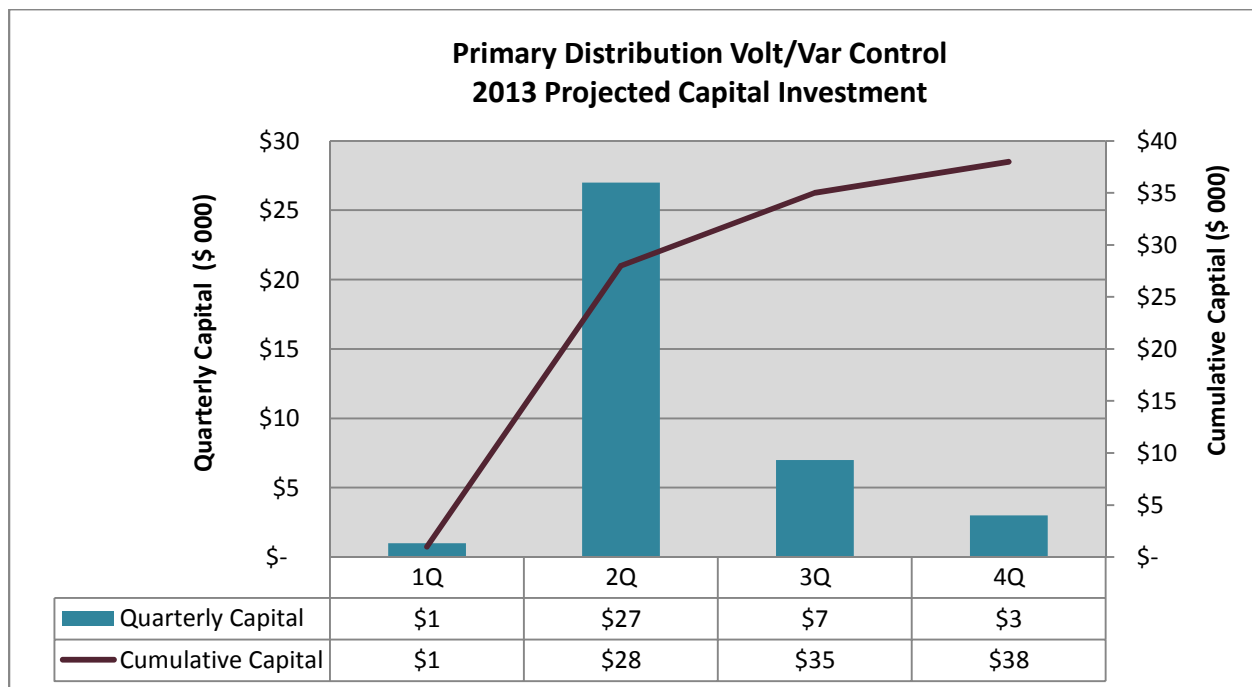
5.B.1: 2013 Program Scope

This program is intended to provide dynamic voltage control and optimal reactive power flow on select primary distribution circuits. Benefits include reducing energy losses due to circulating network flows and provide reduced voltage reductions to support optimal use of the system. The initial focus is on insuring all switched low voltage distribution capacitors in the metro east area currently being controlled by an obsolete system will interact with the new ADMS.

5.B.2: 2013 Program Capital Investments

Figure 5.B.2 represents the projected 2013 capital expenditures for the Primary Distribution Volt/Var Control program. AIC estimates the 2013 program cost to be approximately \$38,000 in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

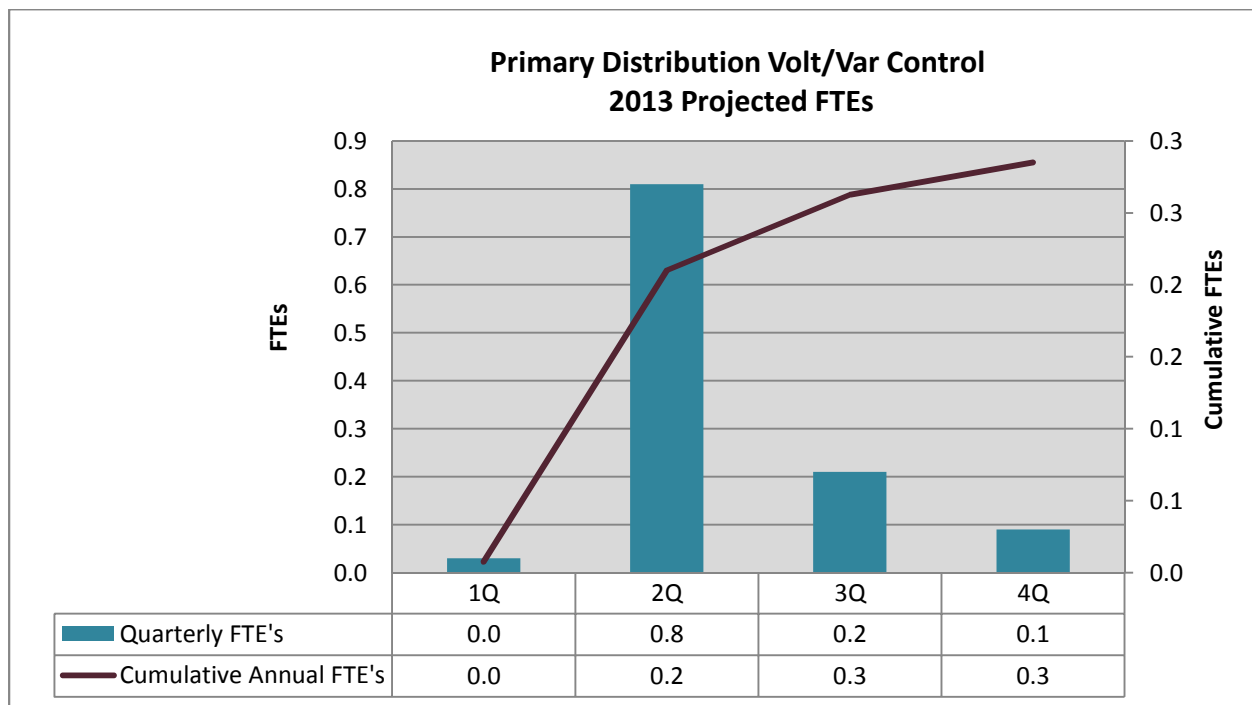
Figure 5.B.2: Primary Distribution Volt/Var Control 2013 Capital Investments



5.B.3: 2013 Program FTEs

Figure 5.B.3 represents the projected FTEs required to perform the scheduled scope of work for the High Voltage Volt/Var program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 5.B.3: Primary Distribution Volt/Var Control 2013 FTEs



5.B.4: Program Units

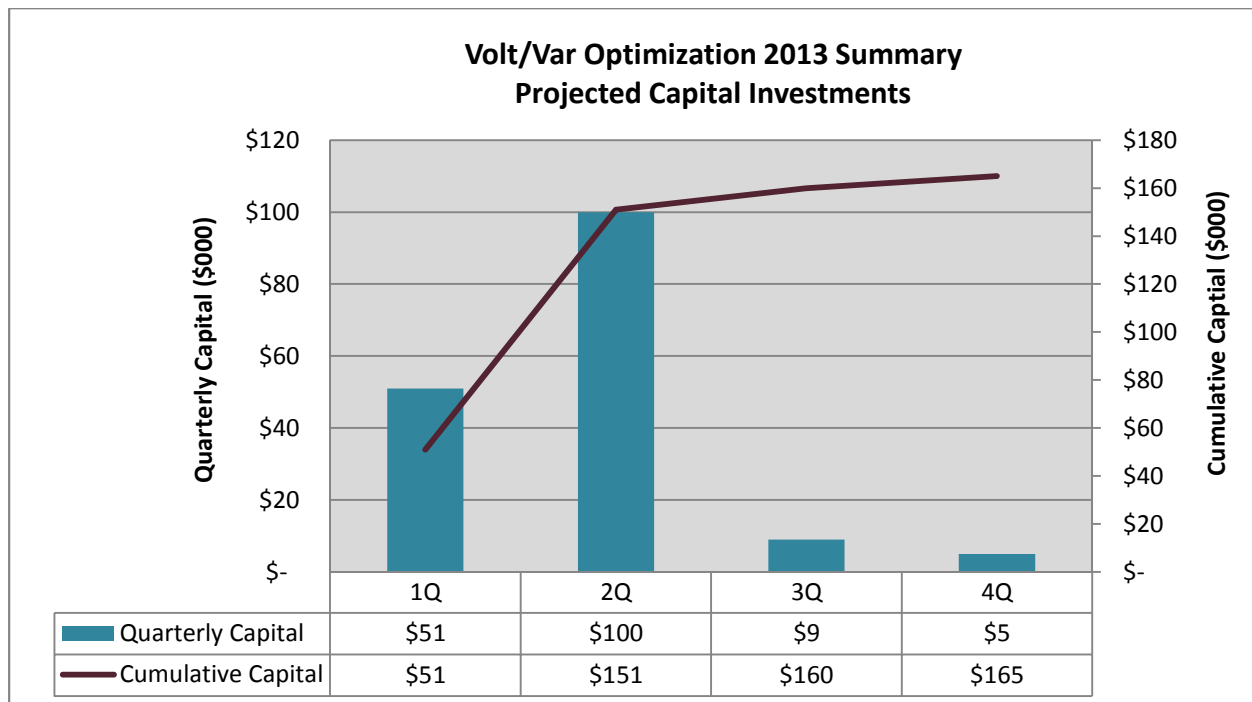
The investment in 2013 is for engineering. There are no units projected to be installed under this program.

Section 5.C: Volt/Var Optimization Summary

5.C.1: Summary Capital Investments

Figure 5.C.1 represents the projected capital expenditures for the Volt/Var Optimization programs. AIC estimates the program cost to be \$165,000 in capital investment, plus associated expenses over the program period. Estimates of cost, and scope of work, and schedules for that work may evolve over time.

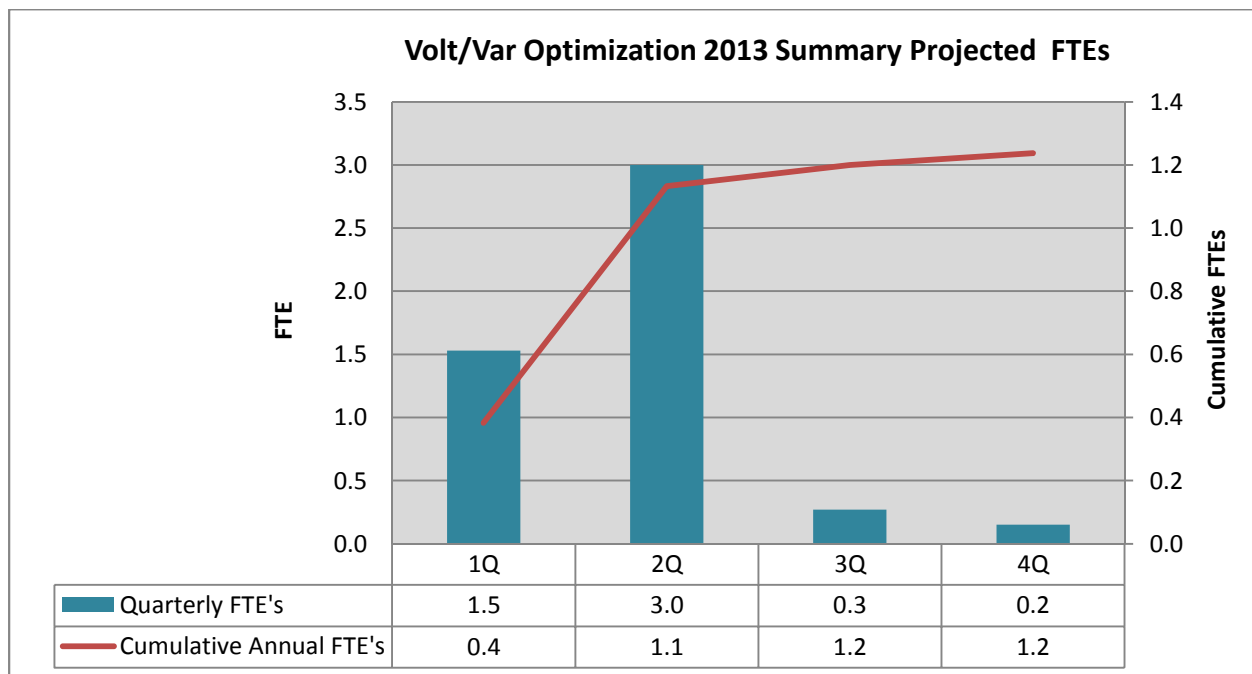
Figure 5.C.1: Volt/Var Optimization 2013 Summary Capital Investments



5.C.2: Summary FTEs

Figure 5.C.2 represents the projected FTEs required to perform the scheduled scope of work. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, legal support, supervision and craft.

Figure 5.C.2: Volt/Var Optimization 2013 Summary FTEs



Section 6: Software and Technology Enhancements

Section 6.A: Advanced Distribution Management System (ADMS)

6.A.1: 2013 Program Scope

This program is to replace AIC's existing SCADA and DDOS systems with an Advanced Distribution Management System (ADMS). This project is composed of three implementation parts.

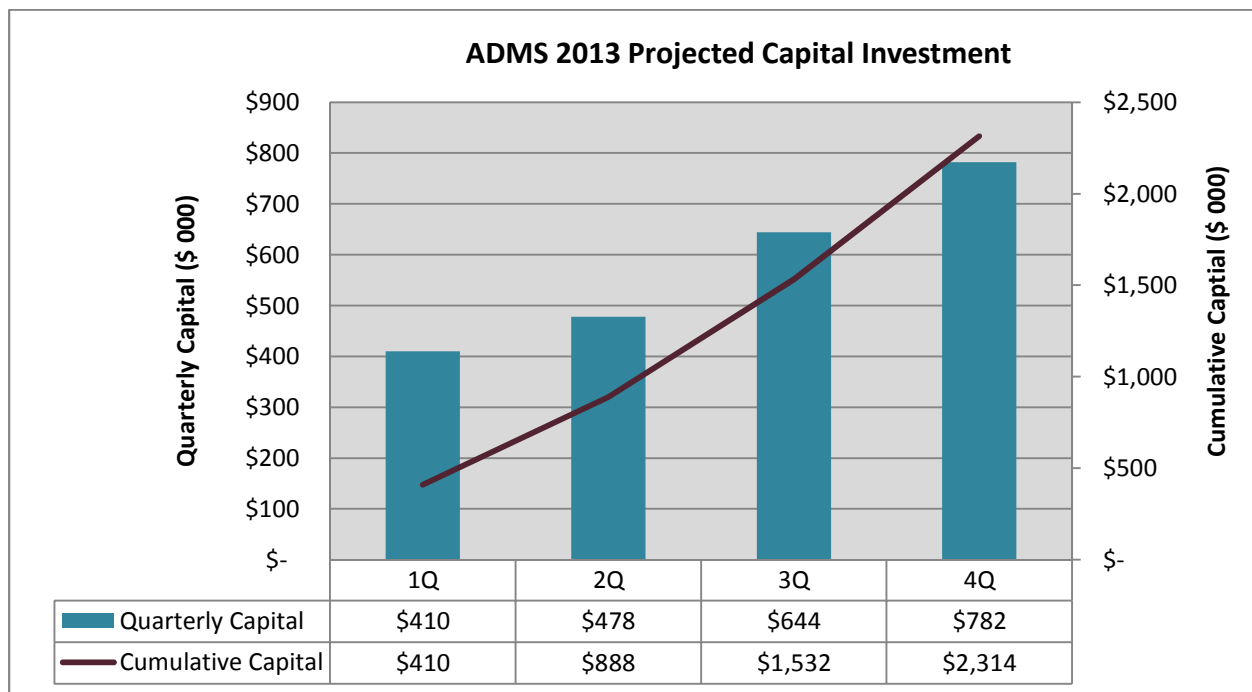
1. SCADA implementation in 2nd quarter of 2013.
2. DMS/Switching implementation in early 2014.
3. OMS/Mobile implementation in mid-2014.

The AIC ADMS will improve the quality of service for the AIC customers in Illinois by responding to customer service interruptions more rapidly. The ADMS will improve the system dispatcher's ability to monitor and control the power system during normal, abnormal, and emergency conditions by providing reliable and appropriate real-time data from the network. Furthermore, the ADMS will improve power system efficiency by helping to maintain acceptable power factors and reducing system losses. Equally important, the ADMS will assist power system maintenance and safety practices by providing more reliable, meaningful, and timely records of the operating history of the power system and its field devices. Finally, the AIC ADMS will improve the ability of the engineering staff to perform power systems analysis and planning by providing increased access to past and current operations data and associated software tools.

6.A.2: 2013 Program Capital Investments

Figure 6.A.2 represents the projected 2013 capital expenditures for the ADMS program. AIC estimates the 2013 program cost to be approximately \$2.3 million in capital investment, plus associated expenses. Estimates of cost, units of work, and schedules for that work may evolve over time.

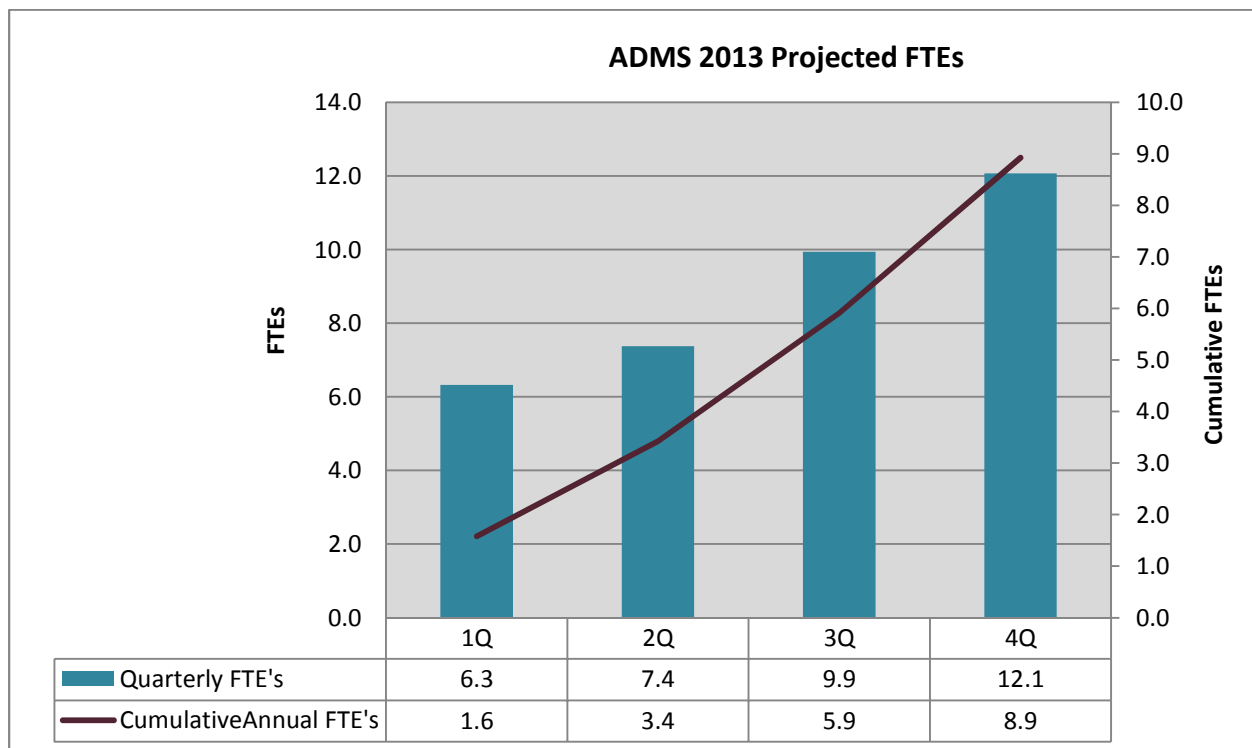
Figure 6.A.2: ADMS 2013 Capital Investments



6.A.3: 2013 Program FTEs

Figure 6.A.3 represents the projected FTEs required to perform the scheduled scope of work for the ADMS program in 2013. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, supervision and craft.

Figure 6.A.3: ADMS 2013 FTEs



Section 6.B: Replace Distribution Engineering Workstation (DEW)

6.B.1: 2013 Program Scope

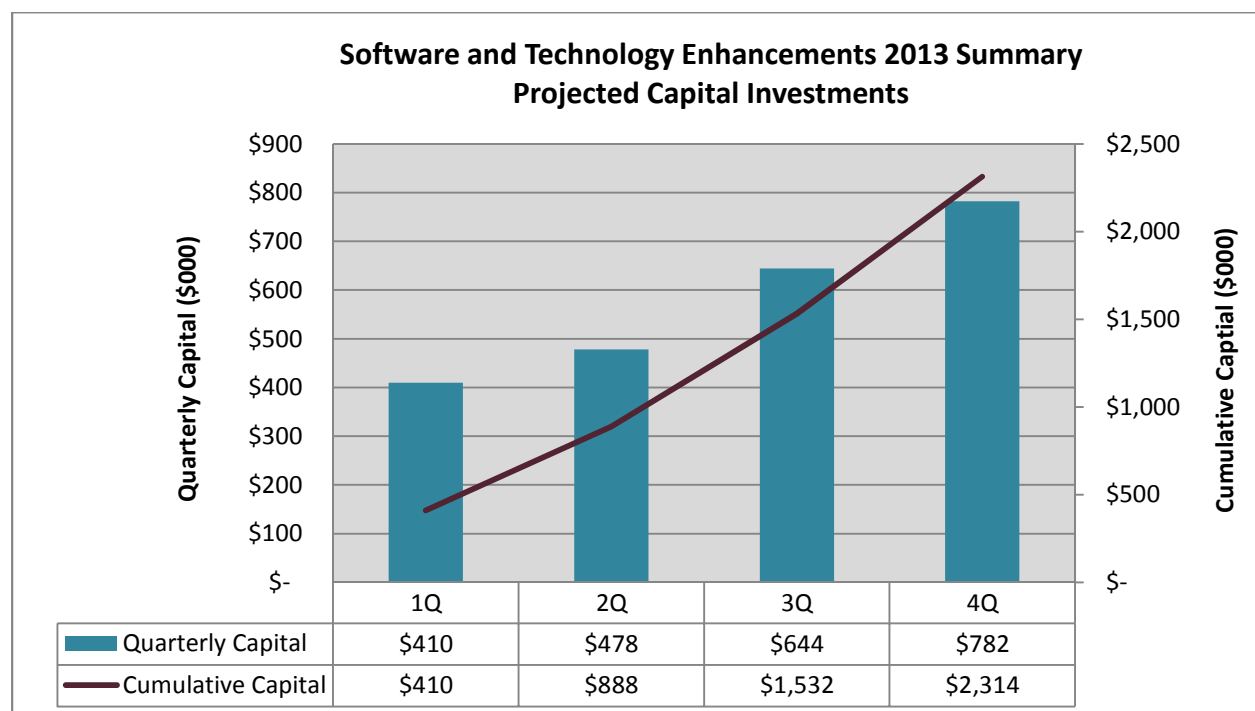
There is no investment associated with this project in 2013.

Section 6.C: Software and Technology Enhancements Summary

6.C.1: Summary Capital Investments

Figure 6.C.1 represents the projected capital investments for the Software and Technology Enhancements programs. AIC estimates the program cost to be \$2.3 million in capital investment, plus associated expenses over the program period. Estimates of cost, and scope of work, and schedules for that work may evolve over time.

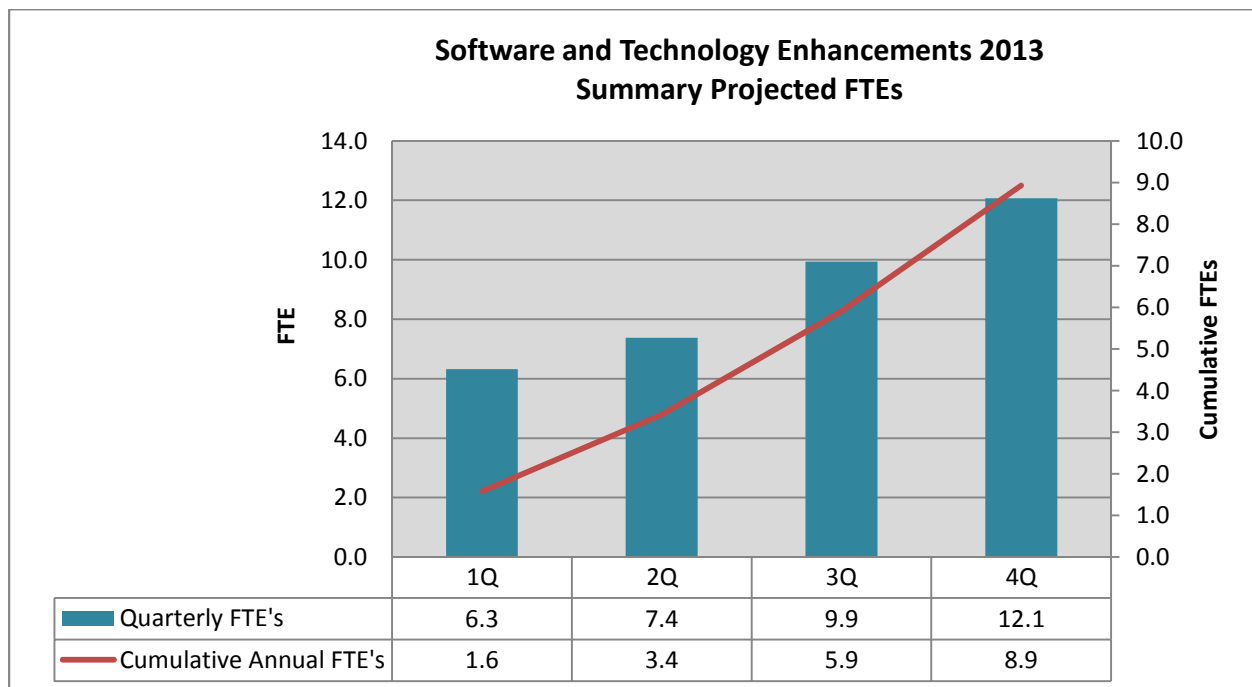
Figure 6.C.1: Software and Technology Enhancements 2013 Summary Capital Investments



6.C.2: Program FTEs

Figure 6.C.2 represents the projected FTEs required to perform the scheduled scope of work. Job classifications may include, but are not limited to, engineers, technicians, work planners, finance support, safety support, scheduling support, legal support, supervision, and craft.

Figure 6.C.2: Software and Technology Enhancements 2013 Summary FTEs



Appendix A: Summary-Level Plan Information

As required by Section 16-108 (b), the total projected \$36.3 million of cumulative capital investment under the 2013 Plan will be incremental to AIC's total annual capital investment program, as defined in Section 16-108.5(b). That is, over the course of 2013, AIC will invest an projected cumulative total of \$36.3million more capital than a capital investment program that invested at an annual rate defined by AIC's average capital spend for calendar years 2008, 2009, and 2010, as reported in AIC's applicable Federal Energy Regulatory Commission ("FERC") Form 1s.

Figure 1 represents the projected total capital investment associated with the 2013 Plan.

Figure 1: 2013 Plan Capital Investments

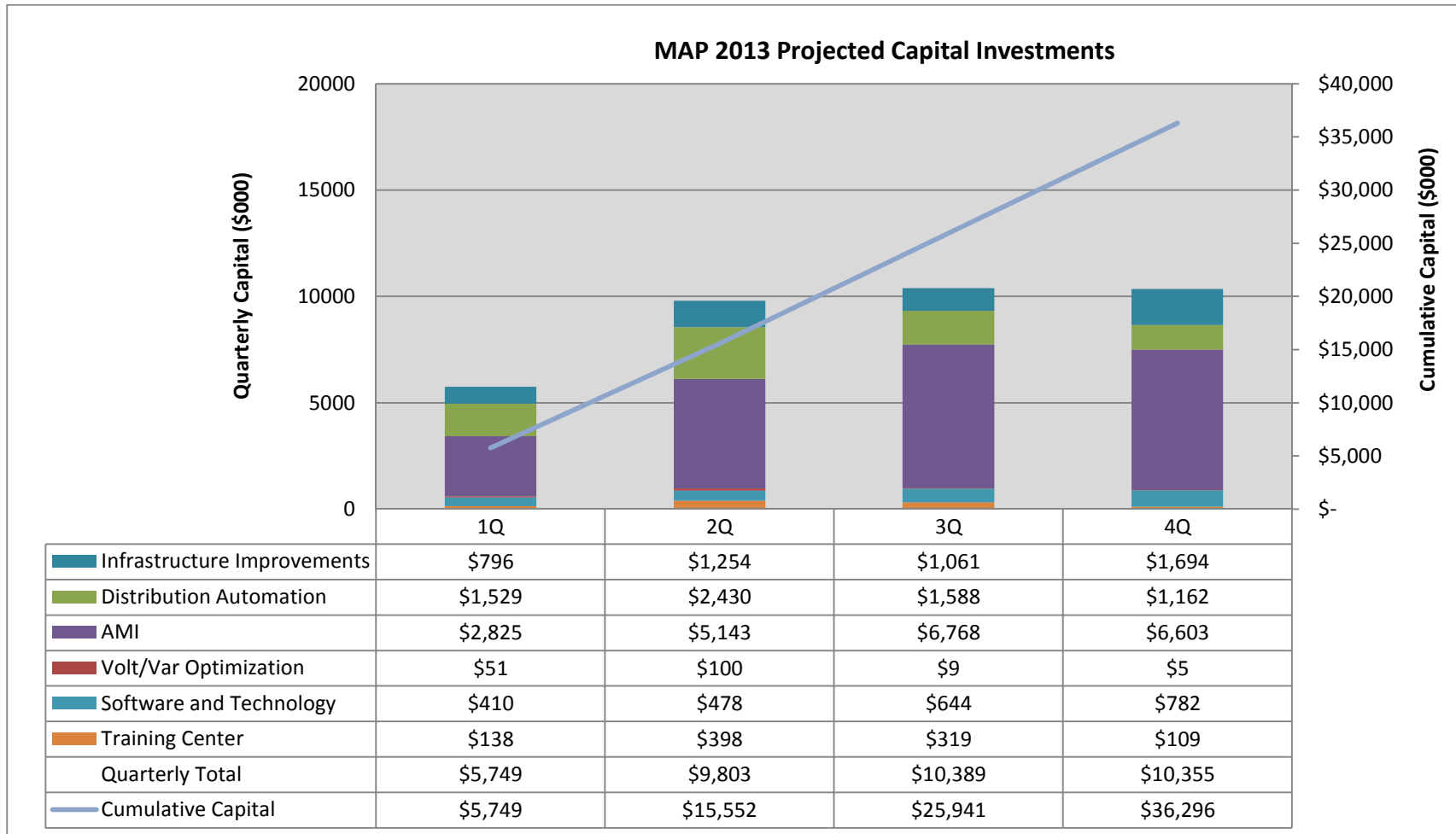


Figure 2 represents the projected total number of units to be installed within the 2013 Plan.

Figure 2: 2013 Plan Units

Infrastructure Improvements	Units	Projected
Replace Primary Distribution Substation Reclosers	Reclosers	9
Substation Animal Protection	Substations	0
Bulk Substation Improvements	Projects	0
Distribution Transformer Reserve	Locations	0
Tie Line Capacity - Line 6973	Project	0
Substation Low side Auto Transfer	Locations	0
High Voltage Distribution Pole Reinforcement	Poles	0
Replace High Voltage Distribution Breakers	Breakers	0
Spacer Cable Program	Miles	0.3
Rebuild Primary Distribution Lines	Miles	0.8
Primary Distribution Lines Capacity Additions	Circuits	1
Bulk Transformer Outage Mitigation	Locations	0
Rebuild High Voltage Distribution Lines	Miles	0.4
Expand Bulk Supply Substations	Locations	0
Underground Primary Distribution Cable	Miles	5
System Tie Primary Distribution	Miles	0
CERT Remediation	Projects	0
Distribution Automation		
Primary Distribution Automation	Projects	9
Communication Infrastructure	None	0
High Voltage Distribution Relaying	Terminals	0
Distribution Substation Metering	Substations	0
High Voltage Distribution Automation	Switch	5
Test Bed	None	1
Advanced Metering Infrastructure		
AMI Summary	Meters (000)	0
Volt/Var Optimization		
High Voltage Distribution Volt / Var Control	Locations	0
Primary Distribution Volt/Var Control	Projects	0
Software and Technology Enhancements		
ADMS	Phases	0
Replacement of DEW	Project	0
Training Facilities		
Training Facilities	Locations	1

Figure 3 represents the total projected FTEs to execute the scheduled scope of work associated with the 2013 Plan. The projected FTEs shown in Figure 3 do not include any induced or indirect FTEs.

Figure 3: 2013 Plan FTEs

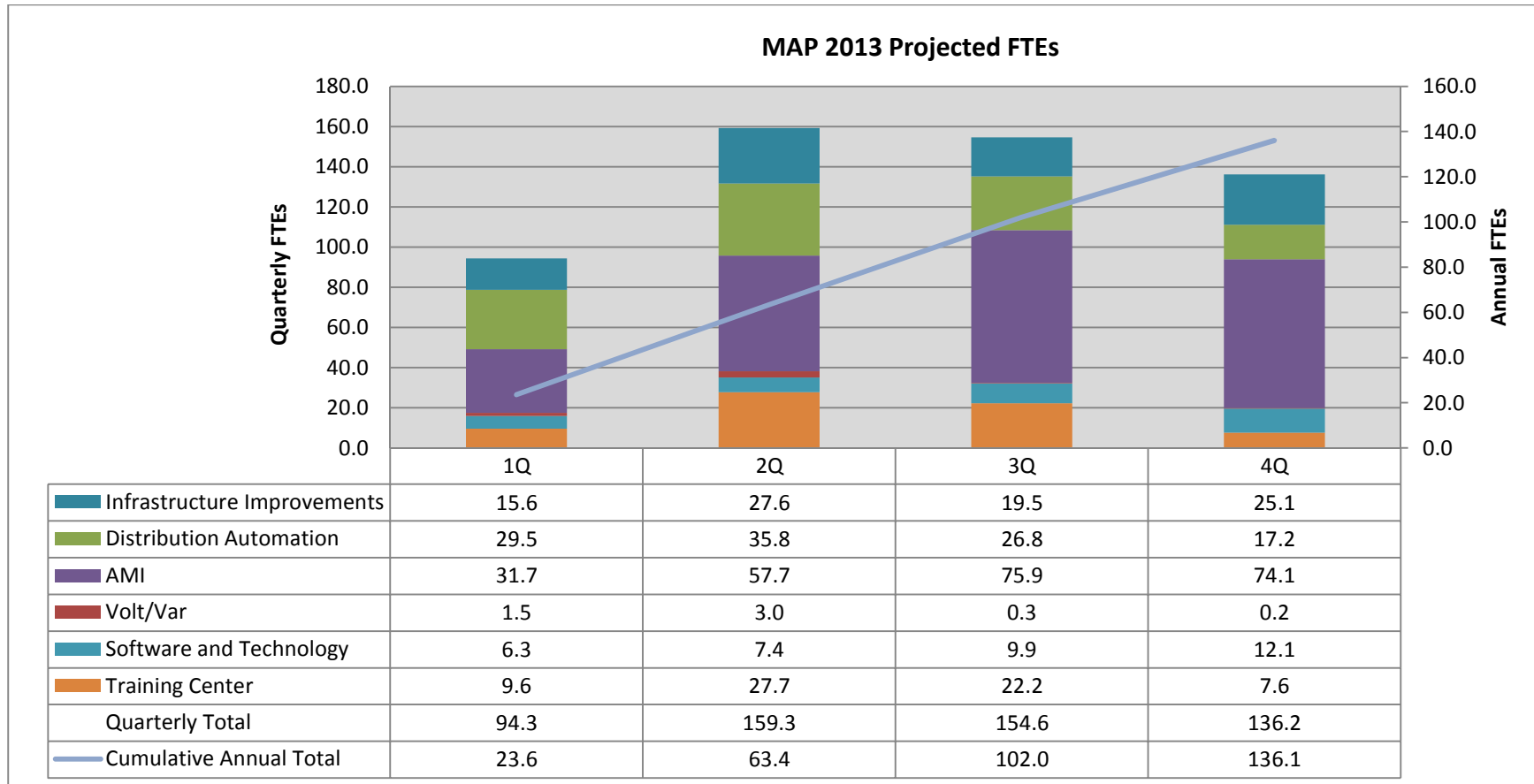


Figure 4: 2013 Projected Projects

Program	Location	Description
ADMS	Illinois	Cycle C ADMS Project
AMI	Illinois	AMI
Bulk Substation Improvements	Illinois	Engineering for future projects
Communication Infrastructure	Illinois	Smart Grid Support
Distribution Substation Transformer Reserve	Sparta	Upgrade Sparta Substation - Engineering & initiate construction
Distribution Substation Transformer Reserve	Sparta	Upgrade Sparta Substation - Site purchase
Distribution Substation Transformer Reserve	Illinois	Engineering for future projects
Expand Bulk Supply Substations	Patoka	New 138/69 kV Patoka area substation - Site purchase
High Voltage Distribution Automation	Decatur	Add SCADA Indication to existing ATO at Decatur Baltimore Substation
High Voltage Distribution Automation	Decatur	Add SCADA Indication to existing ATO at Decatur, East substation
High Voltage Distribution Automation	Edwardsville	Add SCADA Indication to existing ATO at Edwardsville 2nd St Substation
High Voltage Distribution Automation	Troy	Add SCADA Indication to existing ATO at Troy Industrial Substation
High Voltage Distribution Automation	Illinois	Purchase and install SCADA FCI (Faulted Circuit Indicators) for installation on 45 Sub-transmission Radial Locations
High Voltage Distribution Automation	Carrier Mills	Carrier Mills - Replace Switch 312&313-SCADA
High Voltage Distribution Automation	Illinois	Engineering for future projects
High Voltage Distribution Pole Reinforcement	Illinois	Engineering for future projects
High Voltage Distribution Relaying	Illinois	Engineering for future projects
High Voltage Volt/Var Control	Illinois	Engineering for future projects
Primary Distribution Automation	Charleston	Replace Charleston S. EIU circuit 501 recloser, SCADA, and interface to DA scheme
Primary Distribution Automation	Charleston	Replace Charleston Hayes St circuit 531 recloser, SCADA, and interface to DA scheme
Primary Distribution Automation	Charleston	Replace Charleston East circuit 506 recloser, SCADA, and interface to DA scheme
Primary Distribution Automation	Macomb	Replace E. Macomb feeder 593 recloser, SCADA, and interface to DA auto trsfr scheme
Primary Distribution Automation	Macomb	Replace N. Macomb feeder 507 recloser, SCADA, and interface to DA auto trsfr scheme
Primary Distribution Automation	Rushville	Install DA auto trsfr scheme, midpoint of East Macomb circuit 593, midpoint of Rushville circuit 561, and at the tie.
Primary Distribution Automation	Macomb	Install DA auto trsfr scheme, midpoint of North Macomb circuit 507, midpoint of W. Macomb circuit 508, and at the tie.
Primary Distribution Automation	Charleston	Install DA auto trsfr scheme, midpoint of East Charleston circuit 506, midpoint of Charleston South EIU circuit 501, and at the tie
Primary Distribution Automation	Charleston	Install DA auto trsfr scheme, midpoint of Charleston Hayes circuit 531 to Charleston circuit 547, and at the tie
Primary Distribution Automation	Illinois	Engineering for future projects.
Primary Distribution Lines Capacity Additions	Belleville	Lebanon Monroe St Ckt 225 Conversion
Primary Distribution Lines Capacity Additions	Illinois	Engineering for future projects
Primary Distribution Volt/Var Control	Illinois	Engineering for future projects
Rebuild High Voltage Distribution Lines	Alton	Alton - MISS-74 - Reconductor 2000' of #2 with 556 ACSR
Rebuild High Voltage Distribution Lines	Illinois	Engineering for future projects
Rebuild Primary Distribution Lines	Steeleville	Complete loops on underground circuit. R29-905
Rebuild Primary Distribution Lines	Eldorado	Eldorado - Upgrade 4000' of 1/0 ACSR with 556 MCM from Rt 142 to 4th St along Rt 45 in Eldorado
Rebuild Primary Distribution Lines	Illinois	Engineering for future projects
Replace Primary Distribution Substation Reclosers	Cambria	Cambria Substation-Replace 3phase recloser on feeder 520
Replace Primary Distribution Substation Reclosers	Athens	Athens Substation Replace 3phase recloser on feeder 524

Replace Primary Distribution Substation Reclosers	Charleston	Charleston Substation-Replace 3phase recloser 547
Replace Primary Distribution Substation Reclosers	Christopher	Christopher West Substation-Replace 3phase recloser 552
Replace Primary Distribution Substation Reclosers	Clifton	Clifton North Substation-Replace 3phase recloser 502
Replace Primary Distribution Substation Reclosers	New Berlin	New Berlin Substation Replace 3phase recloser 579
Replace Primary Distribution Substation Reclosers	Quincy	Quincy 34th & Harrison Substation-Replace 3phase recloser on feeder 504
Replace Primary Distribution Substation Reclosers	Carbondale	Carbondale Pleasant Hill Substation -Replace 3phase recloser on feeder 509/511
Replace Primary Distribution Substation Reclosers	Illinois	Engineering for future projects
Spacer Cable Program	Mt Vernon	Replace .3 miles of spacer cable
Substation Animal Protection	Illinois	Engineering for future projects
System Tie Primary Distribution	Illinois	Engineering for future projects
Test Bed	Champaign	Test Bed Substation
Test Bed	Champaign	Test Bed Distribution
Test Bed	Champaign	Test Bed Network Installation
Test Bed	Champaign	Test Bed Substation - 69kV
Test Bed	Champaign	Test Bed Tools
Test Bed	Champaign	Test Bed Operation
Training Facilities	Decatur	Decatur Training Center Enhancements - 2nd Meter Training Room
Training Facilities	Decatur	Test Bed Relay
Training Facilities	Turkey Hill	Turkey Hill Enhancements - Overhead Lines
Training Facilities	Decatur	Decatur Training Center Feed
Training Facilities	Turkey Hill	Turkey Hill Training Center Pavilion Enhancements
Training Facilities	Illinois	Training Center Tools/Computers
Underground Primary Distribution Cable	Illinois	Underground primary distribution cable replacement
Underground Primary Distribution Cable	Illinois	Engineering for future projects